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TREASURY DEPARTMENT
UNITED STATES PUBLIC HEALTH SERVICE

HYGIENIC LABORATORY.—BULLETIN No. 87

AUGUST, 1913

DIGEST OF COMMENTS
ON THE
PHARMACOPŒIA OF THE UNITED STATES
OF AMERICA
[EIGHTH DECENNIAL REVISION]
AND ON THE
NATIONAL FORMULARY
[THIRD EDITION]

FOR THE CALENDAR YEAR ENDING DECEMBER 31

1911

BY

MURRAY GALT MOTTER

AND

MARTIN I. WILBERT



WASHINGTON
GOVERNMENT PRINTING OFFICE
1913

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PREFACE.

The literature reviewed in this, the seventh bulletin of the present series of Digest of Comments on the official standards, includes material that is of unusual interest, both from the point of view of the authors and from that of the users of the Pharmacopœia and the National Formulary.

Not the least interesting of the many happenings herein reflected is the preliminary announcement regarding the scope of these two now officially recognized books of standards. The lists of the articles to be dropped from and added to the Pharmacopœia and to the National Formulary, as reported in the current medical and pharmaceutical journals, have been included for ready reference, and present a satisfactory and comprehensive reflection of the probable scope and content of the U. S. P. IX and the N. F. IV.

The German Pharmacopœia, published in 1910, has been the subject of a number of more or less comprehensive reviews and has, in some directions at least, been criticized rather severely. Where this comment and criticism apply directly to the nature of, or to the articles described in, the U. S. P. or the N. F., an effort has been made to reflect it in a practical way in the following pages, so as to make the data directly available in the revision of these two books.

Some indication of the recognized importance of the German Pharmacopœia as a standard for foreign pharmacopœias, particularly for our own U. S. P. and N. F., is evidenced by the fact that, of the 671 titles included in that book, there are less than 100 that are not represented in either the present or the forthcoming edition of the U. S. P. or the N. F., and that probably no other pharmacopœia includes so few titles that are not also included in one or more of the other national pharmacopœias. The statement has been made (Hyg. Lab. Bull. 75, p. 114) that, apart from the recently added new synthetic remedies, the Ph. Germ. V. contains less than a dozen titles that are not also included in other foreign pharmacopœias. In addition to this it is generally recognized that the German Pharmacopœia is more widely used and more frequently consulted than is any one of the other national standards, and that for many years it has been looked to as the prototype of books of this nature.

In Germany, as well as in our own country, some dissatisfaction has been evidenced in connection with the scope and content of the official standard for drugs and medicines, and critics have advanced many and various reasons for including in the pharmacopœia definitions for all widely used medicines, and, on the other hand, for

restricting official recognition of drugs and preparations of drugs to a comparatively few, standardizable, and readily controlled medicaments.

In our own country the movement to provide for a more restricted official recognition of drugs and their preparations appears to have developed along practical lines, and has taken the form of a cooperative movement, under the auspices of the Council on Medical Education of the American Medical Association, to have State medical examining and licensing boards restrict examinations in *materia medica* to a recognized list of widely used remedies, generally thought to be useful or popular, because of the attention given them in contemporaneous medical literature.

The need for some form of restriction, of the actively discussed *materia medica*, is demonstrated in a number of ways, not the least important being the general recognition of the facts that the medicines dispensed in the average pharmacy are not always of the quality prescribed by the Pharmacopœia, and that the immense number of articles, usually carried in stock by the apothecary, actually precludes the supervision and care in the testing of medicaments required by the pharmacopœial monographs. The variations now existing in different sections of the country are well illustrated by the several tables showing the results of chemical analyses of drugs and preparations reported by different analysts, and are more specifically dealt with in the annual reports of some of the State chemists, who note that inferiority or unreliability is not necessarily a simple question of price or origin, but is frequently a more or less complicated one, depending on a number of factors but primarily on the failure of the dispenser adequately to examine the materials purchased by him. As noted above, this failure is, to a considerable extent, necessitated by the large number of articles found in the average drug store; and the impracticability, for economic and other reasons, of devoting the time and material necessary to make the required examinations and tests. These several factors could, however, be largely counteracted by the development of a recognized list of useful remedies, whose identity, purity, and activity could be readily supervised and guaranteed by any really efficient apothecary.

The limiting of questions in *materia medica*, by State boards of medical and other examiners to such a recognized list of remedies, and the concerted efforts of pharmacists to have such remedies of pharmacopœial quality, would go far toward inducing medical men to restrict their use of drugs to remedies of supposedly established value. This would lead to the further restriction of the recognized drugs, by the elimination of such as may be found to be of indifferent or of secondary value, and would lessen, if not entirely suppress, the present unnecessary duplication of remedies having practically the same properties and action.

The nature and progress of the movement to establish a limited *materia medica* list is recorded to a certain extent in the comments on the scope of the *pharmacopœia*, and more directly under the newly included heading "A limited *materia medica*."

An effort has been made to reflect at some length all of the literature relating to official substances, and to give, in as concise a form as practicable, working references to the unimportant as well as the important communications on any given subject.

In connection with many of the topics under active discussion—such as vaccines, sera, salvarsan, Wassermann reaction and biologic methods of diagnosis—it is, of course, practically impossible to do more than reflect the general trend of the discussion; any attempt to include a complete bibliography of these several subjects would be so compendious as to overshadow and quite bury the material available on the less important topics or articles.

In this bulletin an attempt has been made to curtail references to papers, reports, and opinions to as great a degree as was thought to be consistent with the objects of the bulletin, and it will be observed that wherever the same thought or fact is embodied in two or more contributions only one is specifically referred to, the others being suggested or recorded by giving the necessary reference or references. In this connection it may again be pointed out that the space devoted to a reference is not infrequently in inverse proportion to its recognized importance, though some idea of the nature and value of the several contributions is usually conveyed by the comparative length of the original article.

The need for greater uniformity in the nomenclature, standards, and tests for articles recognized in the several national *pharmacopœias* has been emphasized during the year 1911, not alone by the comparative reviews of the German *Pharmacopœia*, but also by a number of more or less comprehensive articles calling attention to existing variations in the official titles for widely used drugs and in the requirements for purity, strength, nature, or origin of articles recognized by practically the same name.

In this connection it may be interesting to note that the third report of the Committee of Reference in Pharmacy to the *Pharmacopœia* Committee of the General Medical Council presages a rather close adherence to the provisions of the Brussels Conference Protocol on the part of the forthcoming edition of the British *Pharmacopœia*, and that this would practically complete the object for which the Conference was originally called.

The general adherence of the now official European *pharmacopœias* to the provisions of the International Treaty signed at Brussels November 29, 1906, has resulted in a proposal to establish an International Secretariate of *Pharmacopœias*, with headquarters at Brussels, and a number of the Powers subscribing to the Brussels Treaty

have already signified their willingness to contribute to the support of such an International Secretariate.

It is becoming more and more generally recognized that the progress marked by any pharmacopœia is but a reflection or a record of the general world-wide progress made in the sciences relating to medicine; and, in turn, each pharmacopœia has, and of necessity must have, a more or less important bearing on future progress in the sciences to which it relates, and thus, in effect, it becomes a potent factor in the development of matters relating to public health.

As in the immediately preceding bulletins of this series, an effort has been made to present a survey of the current literature relating to reagents, stains, and methods of applying them in clinical laboratories for the scientific study of disease. The need for such a review is shown by the fact that a number of reagents and stains are to be included in the Pharmacopœia of the United States, and corresponding collections have already been included in several of the recently published foreign pharmacopœias.

An effort has also been made to reflect the current literature relating to the standardization and the uses of disinfectants, largely for the purpose of calling renewed attention to the possibilities and limitations of disinfection as a factor in preventing the spread of communicable diseases.

These several subjects are so intimately related to the immediate purpose and object of the Public Health Service that the items should prove to be of more than ordinary interest to the officers of this Service who may be engaged either in laboratory or in field work.

As indicated by the note under the general heading "Syrupi," the compilers are not responsible for the frequent use of the term "sirup" in place of the English pharmacopœial title "syrup."

The thanks of the compilers are due, and are hereby extended, to the publishers and editors of journals supplying their periodicals in exchange; to the Secretaries of State and National pharmaceutical organizations, for copies of the several annual proceedings; to John Uri Lloyd, Cincinnati, for the use of several Eclectic journals; and to the officers of the Library of Congress, the library of the Department of Agriculture, the library of the Office of the Surgeon General, Washington; the library of the Philadelphia College of Pharmacy, and the library of the College of Physicians, Philadelphia, for the use of periodicals not directly accessible to the compilers.

M. G. M.

M. I. W.

DIVISION OF PHARMACOLOGY,
HYGIENIC LABORATORY,
February 25, 1913.

LIST OF THE LITERATURE REVIEWED.

1. TITLE ABBREVIATIONS—JOURNALS.

- Am. Chem. J.—American Chemical Journal, Baltimore, 1911, v. 45, 46.
 Am. Druggist.—American Druggist and Pharmaceutical Record, New York, 1911, v. 58, 59.
 Am. J. Clin. Med.—American Journal of Clinical Medicine, Chicago, 1911, v. 18.
 Am. J. M. Sc.—American Journal of the Medical Sciences, Philadelphia, 1911, v. 141, 142.
 Am. J. Pharm.—American Journal of Pharmacy, Philadelphia, 1911, v. 83.
 Am. J. Physiol.—American Journal of Physiology, Boston, 1911, v. 28, 29.
 Am. J. Sc.—American Journal of Science, New Haven, 1911, v. 31, 32 (181-182).
 Am. Med.—American Medicine, New York, 1911, v. 17.
 Am. Perf.—The American Perfumer and Essential Oil Review, New York, 1911-12, v. 6.
 Am. Vet. Rev.—American Veterinary Review, New York, 1910-11, v. 38.
 Analyst (The), London, 1911, v. 35.
 Analyt. Notes.—Evans Sons Lescher & Webb, Analytical Notes, 1911, Liverpool, 1912.
 Analyt. Rep.—Smith, Kline & French Co., Analytical Report, Philadelphia, 1911.
 Ann. Chem.—Justus Leibig's Annalen der Chemie, Leipzig, 1911, v. 378-386.
 Ann. chin. analyt.—Annales de chimie analytique, Paris, 1911, v. 16.
 Ann. falsif.—Annales des falsifications, Paris, 1911, v. 5, 6.
 Ann. Pharm. Louvain.—Annales de Pharmacie, Louvain, 1911, v. 17.
 Ann. Bot.—Annals of Botany, London, 1911, v. 25.
 Ann. Rep. Food & Drug Com. Missouri.—Annual Report, Food and Drug Commissioner, Missouri, 1911.
 Ann. Rep. U. S. Dept. Agric.—Annual Report, U. S. Department of Agriculture, 1911.
 Apothecary (The), Boston, 1911, v. 23.
 Apoth.-Ztg.—Apotheker-Zeitung, Berlin, 1911, v. 26.
 Arb. k. Gendtsamte.—Arbeiten aus dem kaiserlichen Gesundheitsamte, Berlin, 1911, v. 37-49.
 Arch. Pharm.—Archiv der Pharmazie, Berlin, 1911, v. 249.
 Arch. exper. Path. u. Pharmacol.—Archiv für experimentelle Pathologie und Pharmacologie, Leipzig, 1911, v. 64-67.
 Arch. Int. Med.—Archives (The) of Internal Medicine, Chicago, 1911, v. 7, 8.
 Arch. internat. pharmacod. et therap.—Archives internationales de pharmacodynamie et de therapie, Brussels and Paris, 1911, v. 21.
 Arch. farmacol. sper.—Archivio di farmacologia sperimentale e Scienze affini, Siena, 1911, v. 11, 12.
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 Ber. pharm. Gesellsch.—Berichte der deutschen pharmazeutischen Gesellschaft, Berlin, 1911, v. 21.
 Bericht von Heinrich Haensel, Pirna, Oct.-Apr. 1910-11.
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 Biochem. Ztschr.—Biochemische Zeitschrift, Berlin, 1911, v. 30-37.
 Board of Pure Food and Drug Commissioners, 1911, Second Annual Report, Providence, R. I.

- Boll. chim. farm.—*Bolletino Chimico Farmaceutico*, Milan, 1911, v. 50.
- Boston M. & S. J.—*Boston Medical and Surgical Journal*, 1911, v. 164, 165.
- Bot. Gaz.—*Botanical Gazette*, Chicago, 1911, v. 51, 52.
- Bot. Centralbl.—*Botanisches Centralblatt*, Jena, 1911, v. 115–117.
- Brit. & Col. Drug.—*British and Colonial Druggist*, London, 1911, v. 59, 60.
- Brit. Food J.—*British Food Journal*, London, 1911, v. 13.
- Brit. M. J.—*British Medical Journal*, London, 1911, v. 1, 2.
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- Bull. Am. Pharm. Assoc.—*Bulletin of the American Pharmaceutical Association*, Chicago, 1911, v. 6.
- Bull. Bur. Chem. U. S. Dept. Agric.—*Bulletins, Bureau of Chemistry, U. S. Department of Agriculture*, 1911, No. 133–147.
- Bull. Bur. Plant Ind. U. S. Dept. Agric.—*Bulletins, Bureau of Plant Industry, U. S. Department of Agriculture*, 1911, No. 198–205.
- Bull. California Bd. Health.—*Monthly Bulletin, California State Board of Health*, 1911, v. 6, 7.
- Bull. Dept. Food & Drug Inspec., Missouri.—*Bulletin of the Department of Food and Drug Inspection, Missouri*, 1911, v. 3.
- Bull. Dept. Agric., Jamaica.—*Bulletin of the Department of Agriculture, Jamaica*, 1911, new series, v. 1, No. 4.
- Bull. Florida Agric. Dept.—*Quarterly Bulletin of the Agricultural Department, Florida*, 1911, v. 21.
- Bull. Kentucky Agric. Exper. Sta.—*Bulletin, Kentucky Agricultural Experiment Station*, 1911, No. 153–158.
- Bull. Kentucky Exper. Sta.—*Bulletin of the Kentucky Experiment Station, Food and Drug Division*, 1911, October.
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- Bull. North Carolina Bd. Health.—*Bulletin of the North Carolina Board of Health, Raleigh*, 1911, v. 27.
- Bull. South Dakota Food & Drug. Dept.—*Bulletin, South Dakota Food and Drug Department*, 1911, No. 23.
- Bull. Texas Bd. Health.—*Bulletin of the Texas Board of Health, Austin*, 1911, v. 5.
- Bull. Hyg. Lab.—*Bulletins Hygienic Laboratory, U. S. Public Health Service*, 1911.
- Bull. Imp. Inst.—*Bulletin of the Imperial Institute, London*, 1911, v. 9.
- Bull. Kansas Bd. Health.—*Bulletin, Kansas State Board of Health*, 1911, v. 7.
- Bull. Lloyd Libr. 1911, No. 18.—*Bulletin of the Lloyd Library of Botany, Pharmacy, and Materia Medica, No. 18, Pharmacy Series No. 4, Cincinnati*, 1911.
- Bull. Pharm.—*Bulletin of Pharmacy, Detroit*, 1911, v. 25.
- Bull. pharm. Sud-Est.—*Bulletin de Pharmacie du Sud-Est; Montpelier*, 1911, v. 16.
- Bull. sc. pharmacol.—*Bulletin des Sciences Pharmacologiques, Paris*, 1911, v. 18.
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- Chem. Abstr.—*Chemical Abstracts, Easton*, 1911, v. 5.
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 Chem. Ind.—Chemische Industrie, Berlin, 1911, v. 34.
 Chem. Zentralbl.—Chemisches Zentralblatt, Berlin, 1911, v. 82.
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 Hyg. Rundschau.—Hygienische Rundschau, Berlin, 1911, v. 21.
 Index Medicus, Washington, 1911, v. 9.
 Jahres-Ber. Caesar & Loretz.—Jahres-Bericht von Caesar & Loretz, Halle a. S. 1911.
 J. Adv. Therap.—Journal (The) of Advanced Therapeutics, New York, 1911, v. 29.
 J. Agric. trop.—Journal d'Agriculture tropicale, Paris, 1911, v. 11.
 J. Am. Chem. Soc.—Journal of the American Chemical Society, Easton, 1911, v. 33.
 J. Am. Inst. Homœop.—Journal of the American Institute of Homœopathy, New York, 1911, v. 3.
 J. Am. M. Assoc.—Journal of the American Medical Association, Chicago, 1911, v. 54, 55.
 J. Biol. Chem.—Journal of Biological Chemistry, New York, 1911, v. 9, 10.
 J. Chem. Soc. Lond.—Journal of the Chemical Society, London, 1911, v. 99, 100.
 J. Exper. M.—Journal of Experimental Medicine, New York, 1911, v. 13.

- J. Frankl. Inst.—Journal (The) of the Franklin Institute, Philadelphia, 1911, v. 171, 172.
- J. Ind. & Eng. Chem.—Journal (The) of Industrial and Engineering Chemistry Easton, 1911, v. 3.
- J. Med. Research—Journal of Medical Research, Boston, 1911, v. 22, 23.
- J. Pharm. Soc. Japan—Yakugakuzasshi (Journal of the Pharmaceutical Society of Japan), 1911.
- J. pharm. Anvers—Journal de pharmacie d'Anvers, 1911, v. 67.
- J. Pharm. Elsass-Lothr.—Journal der Pharmacie von Elsass-Lothringen, 1911, v. 38.
- J. pharm. et chim.—Journal de pharmacie et de chimie, Paris, 1911, 7 ser. v. 3, 4.
- J. Pharmacol. & Exper. Therap.—Journal of Pharmacology and Experimental Therapeutics, Baltimore, 1911–12, v. 3.
- J. physiol. et path. gén.—Journal de physiologie et de pathologie général, Paris, 1911, v. 13.
- J. prakt. Chem.—Journal für praktische Chemie, Leipzig, 1911, v. 83, 84.
- J. Physiol. Lond.—Journal of Physiology, London, 1911, v. 42, 43.
- J. Soc. Chem. Ind.—Journal of the Society of Chemical Industry, London, 1911, v. 30.
- Lancet (The), London, 1911, v. 180, 181.
- Med. Rec.—Medical Record, New York, 1911, v. 79, 80.
- Merck's Ann. Rep.—Merck's Annual Report, 1911, Darmstadt, 1912, v. 25.
- Merck's Arch.—Merck's Archives, New York, 1911, v. 13.
- Merck's Rep.—Merck's Report, New York, 1911, v. 20.
- Meyer Bros. Drug.—Meyer Brothers Druggist, St. Louis, 1911, v. 32.
- Midl. Drug.—Midland Druggist and Pharmaceutical Review, Columbus, 1911, v. 45.
- Monatsh. Chem.—Monatshefte für Chemie, Vienna, 1911, v. 32.
- Monit. Scientif.—Le Moniteur Scientifique, Paris, 1911, v. 72, 73.
- Montreal Pharm. J.—Montreal Pharmaceutical Journal, 1911, v. 22.
- N. A. R. D. Notes—The Journal of the National Association of Retail Druggists, Chicago, 1911, v. 12, 13.
- Nat. Druggist—National (The) Druggist, St. Louis, 1911, v. 41.
- Nat. Eclect. M. Assoc. Quart.—The National Eclectic Medical Association Quarterly, Cincinnati, 1911, v. 2.
- New Hampshire San. Bull.—New Hampshire Sanitary Bulletin, 1911, v. 3, No. 12–14.
- New Idea (The), Detroit, 1911, v. 33.
- N. York M. J.—New York Medical Journal, 1911, v. 93, 94.
- Northwestern Druggist (The), Minneapolis, 1911, v. 11.
- Notices of Judgment, U. S. Department of Agriculture, 1911, No. 710–1198.
- Oesterr. Chem.-Ztg.—Oesterreichische Chemiker-Zeitung, Vienna, 1911, v. 14.
- Öster. Sanitätswesen—Das Österreichische Sanitätswesen, Wien, 1911, v. 23.
- Oil, Paint, and Drug Reporter, New York, 1911, v. 79, 80.
- Pacific Drug Rev.—Pacific (The) Drug Review, Portland, 1911, v. 23.
- Pacific Pharm.—Pacific (The) Pharmacist, San Francisco, 1911–12, v. 5.
- Pflanzer (Der), Tanga, 1911, v. 7.
- Pharm. Era—Pharmaceutical (The) Era, New York, 1911, v. 44.
- Pharm. J.—Pharmaceutical (The) Journal, London, 1911, v. 86–87.
- Pharm. Weekblad—Pharmaceutisch Weekblad, Amsterdam, 1911, v. 48.
- Pharm. Post—Pharmazeutische Post, Wien, 1911, v. 44.
- Pharm. Praxis—Pharmazeutische Praxis, Wien und Leipzig, 1911, v. 10.
- Pharm. Ztg.—Pharmazeutische Zeitung, Berlin, 1911, v. 56.
- Pharm. Zentralh.—Pharmazeutische Zentralhalle für Deutschland, Dresden, 1911, v. 52.
- Philippine J. Sc.—Philippine (The) Journal of Science, Manila, 1911, v. 6. A. B. & C.
- Phys. Drug News.—Physicians' Drug News, Newark, 1911, v. 6.

- Pract. Drug.**—**Practical (The) Druggist and Pharmaceutical Review of Reviews**, New York, 1911, v. 29.
- Practitioner (The)** London, 1911, v. 86, 87.
- Proc. Am. Philosoph. Soc.**—**Proceedings of the American Philosophical Society**, Philadelphia, 1911, v. 50.
- Proc. Assoc. Off. Agric. Chem.**—**Proceedings of the Association of Official Agricultural Chemists**, Washington, 1911, 28th Annual Convention (Bulletin No. 152, Bureau of Chemistry, U. S. Department of Agriculture, 1912).
- Proc. N. W. D. A.**—**Proceedings of the National Wholesale Druggists' Association**, New York, 1911, v. 37.
- Proc. Roy. Soc. Lond.**—**Proceedings of the Royal Society**, London, 1911, v. 85.
- Proceedings of State pharmaceutical associations:**
- Proc. Alabama Pharm. Assoc.** 1911.
 - Proc. Connecticut Pharm. Assoc.** 1911.
 - Proc. Florida Pharm. Assoc.** 1911.
 - Proc. Georgia Pharm. Assoc.** 1911.
 - Proc. Illinois Pharm. Assoc.** 1911.
 - Proc. Indiana Pharm. Assoc.** 1911.
 - Proc. Iowa Pharm. Assoc.** 1911.
 - Proc. Kansas Pharm. Assoc.** 1911.
 - Proc. Kentucky Pharm. Assoc.** 1911.
 - Proc. Louisiana Pharm. Assoc.** 1911.
 - Proc. Maine Pharm. Assoc.** 1911.
 - Proc. Maryland Pharm. Assoc.** 1911.
 - Proc. Massachusetts Pharm. Assoc.** 1911.
 - Proc. Michigan Pharm. Assoc.** 1911.
 - Proc. Minnesota Pharm. Assoc.** 1911.
 - Proc. Mississippi Pharm. Assoc.** 1911.
 - Proc. Missouri Pharm. Assoc.** 1911.
 - Proc. Nebraska Pharm. Assoc.** 1911.
 - Proc. New Jersey Pharm. Assoc.** 1911.
 - Proc. New York Pharm. Assoc.** 1911.
 - Proc. North Carolina Pharm. Assoc.** 1911.
 - Proc. North Dakota Pharm. Assoc.** 1911.
 - Proc. Ohio Pharm. Assoc.** 1911.
 - Proc. Pennsylvania Pharm. Assoc.** 1911.
 - Proc. South Carolina Pharm. Assoc.** 1911.
 - Proc. South Dakota Pharm. Assoc.** 1911.
 - Proc. Tennessee Pharm. Assoc.** 1911.
 - Proc. Texas Pharm. Assoc.** 1911.
 - Proc. Vermont Pharm. Assoc.** 1911.
 - Proc. Virginia Pharm. Assoc.** 1911.
 - Proc. Washington Pharm. Assoc.** 1911.
 - Proc. West Virginia Pharm. Assoc.** 1911.
 - Proc. Wisconsin Pharm. Assoc.** 1911.
- Public Health Rep.**—**Public Health Reports**, Washington, 1911, v. 26.
- Répert. pharm.**—**Répertoire de Pharmacie**, Paris, 1911, v. 23.
- Rep. Chem. Lab. Am. M. Assoc.**—**Reports of the Chemical Laboratory of the American Medical Association**, Chicago, 1911, v. 4.
- Rep. Com. Ref. Gen. Med. Council**, 1911—**Third Report of the Committee of Reference in Pharmacy to the Pharmacopœia Committee of the General Medical Council**, May, 1911.
- Supplementary Report** . . . July 31, 1911.

- Rep. Council Pharm. & Chem.—Reports of the Council of Pharmacy and Chemistry, American Medical Association, Chicago, 1911.
- Rep. Dairy & Food Com. Connecticut—Report of the Dairy and Food Commissioner, Connecticut, 1910, Hartford, 1911.
- Rep. Dairy & Food Com. Ohio—Twenty-fifth Annual Report of the Ohio Dairy and Food Commissioner, 1910, Columbus, 1911.
- Rep. District of Columbia Health Off.—Report of the Health Officer of the District of Columbia, 1911, Washington, 1912.
- Rep. Local Govt. Bd. Lond.—Report of the Local Government Board, Supplement, Report of the Medical Officer, London, 1911, 40th.
- Rep. Massachusetts Bd. Health—Report of the Massachusetts State Board of Health, Boston, 1911, 43rd.
- Rep. Missouri Bot. Gard.—Report, Missouri Botanical Garden, 22nd Annual, 1910, St. Louis, 1911.
- Rep. Tennessee Bd. Health—Report of the Tennessee Board of Health. Biennial, 1910-11.
- Rev. Am. Farm. y Med.—Revista Americana de Farmacia y Medicina, New York, 1911, v. 15.
- Riedel's Berichte, Berlin, 1911.
- Riedel's Mentor, Berlin, 1911.
- Rocky Mountain Druggist (The), Denver, 1911, v. 25.
- Schweiz. Wchnschr. Chem. u. Pharm.—Schweizerische Wochenschrift für Chemie und Pharmacie, Zürich, 1911, v. 49.
- Sc. Am. Suppl.—Scientific American Supplement, New York, 1911, v. 71, 72.
- Sc. & Ind. Bull.—Scientific and Industrial Bulletin of Roure-Bertrand Fils of Grasse, 1911.
- Semi-Ann. Rep.—Semi-Annual Report, Schimmel & Co., Miltitz, 1911.
- Southall Bros. & Barclay—Nineteenth Laboratory Report, 1911.
Birmingham, 1912.
- Southern Pharm. J.—Southern (The) Pharmaceutical Journal, Dallas, 1910-1911, v. 3.
- Spatula (The), Boston, 1911, v. 17.
- Südd. Apoth.-Ztg.—Süddeutsche Apotheker-Zeitung, Stuttgart, 1911, v. 51.
- Svensk farm. Tidskr.—Svensk farmaceutisk Tidskrift, Stockholm, 1911, v. 15.
- Therap. Gaz.—Therapeutic Gazette, Detroit, 1911, v. 35.
- Therap. Monatsh.—Therapeutische Monatshefte, Berlin, 1911, v. 25.
- Therap. Gegenw.—Therapie der Gegenwart, Berlin, 1911, v. 52 (New ser., v. 13).
- Therapist (The), London, 1911, v. 21.
- Tr. Am. Inst. Chem. Eng.—Transactions of the American Institute of Chemical Engineers, New York, 1911, v. 4, 1912.
- Tr. Am. M. Assoc. Sec. Pharm. & Therap.—Transactions of the Section on Pharmacology and Therapeutics of the American Medical Association, Chicago, 1911.
- Tropenpflanzer (Der), Berlin, 1911, v. 15.
- Vet. J.—Veterinary Journal, London, 1911, v. 67 (New ser., v. 18).
- Western Druggist (The), Chicago, 1911, v. 33.
- Year-Book of Pharmacy and Transactions of the British Pharmaceutical Conference, London, 1911.
- Ztschr. allg. österr. Apoth. Ver.—Zeitschrift des allgemeinen österreichischen Apotheker-Vereines, Vienna, 1911, v. 49.
- Ztschr. anal. Chem.—Zeitschrift für analytische Chemie, Wiesbaden, 1911, v. 50.
- Ztschr. ang. Chem.—Zeitschrift für angewandte Chemie, Berlin, 1911, v. 24.
- Ztschr. anorg. Chem.—Zeitschrift für anorganische Chemie, Hamburg, 1911, v. 70-72.
- Ztschr. exper. Path. u. Therap.—Zeitschrift für experimentelle Pathologie und Therapie, Berlin, 1911, v. 9.
- Ztschr. öffentl. Chem.—Zeitschrift für öffentliche Chemie, Plauen i. V., 1911, v. 17.

- Ztschr. physik. Chem.*—Zeitschrift für physikalische Chemie, Leipzig, 1910, 1911, 71-78.
- Ztschr. physiol. Chem.*—Zeitschrift für physiologische Chemie, Hoppe-Seyler, Strassburg, 1911, v. 69-76.
- Ztschr. Unters. Nahr. u. Genussm.*—Zeitschrift für Untersuchung der Nahrungs und Genussmittel, Berlin, 1911, v. 21, 22.
- Zentralbl. Biochem. u. Biophysik.*—Zentralblatt für Biochemie und Biophysik, Leipzig, 1911, v. 11, 12.
- Zentralbl. Physiol.*—Zentralblatt für Physiologie, Leipzig und Wien, 1911, v. 25.
- Zentralbl. Physiol. u. Path. Stoffwechs.*—Zentralblatt für die gesamte Physiologie und Pathologie des Stoffwechsels, Berlin und Wien, 1911, v. 6.

2. TITLE ABBREVIATIONS—PHARMACOPŒIAS AND NONOFFICIAL STANDARDS.

- Ph. Arg. I.*—Farmacopea Nacional Argentina, Primera edición, 1898.
- Ph. Austr. VIII.*—Pharmacopœa Austriaca, editio octava, 1906.
- Ph. Belg. III.*—Pharmacopœa Belgica, editio tertia, 1906.
- Ph. Brit. IV.*—British Pharmacopœia, 1898.
- Ph. Chil. I.*—Farmacopea Chilena, 1886.
- Ph. Dan. VII.*—Pharmacopœa Danica, 1907.
- Ph. Fr. V.*—Codex Medicamentarius Gallicus, Pharmacopée Française, 1908.
- Ph. Germ. V.*—Deutsches Arzneibuch, 5. Ausgabe, 1910.
- Ph. Helv. IV.*—Pharmacopœa Helvetica, editio quarta, 1907.
- Ph. Hisp. VII.*—Farmacopea Oficial Española, séptima edición, 1905.
- Ph. Hung. III.*—Pharmacopœa Hungarica, editio tertia, 1909.
- Ph. Ital. III.*—Farmacopea ufficiale del regno d'Italia, Terza edizione, 1909.
- Ph. Japon. III.*—The Pharmacopœia of Japan, 1906 (English translation, 1907).
- Ph. Mex. IV.*—Nueva Farmacopea Mexicana, cuarta edición, 1904.
- Ph. Ndl. IV.*—Pharmacopœa Nederlandica, editio quarta, 1905.
- Ph. Ross. VI.*—Pharmacopœa Rossica, sixth edition, 1910.
- Ph. Serb. II.*—Pharmacopœa Serbica, editio secunda, 1908.
- Ph. Svec. IX.*—Svenska Farmakopén (Pharmacopœa Svecica, ed. IX), 1908.
- Ph. Ven. I.*—Farmacopea Venezolana, 1898.
- U. S. P. VIII.*—Pharmacopœia of the United States, 8th Dec. Rev., 1905.
- N. F. III.*—The National Formulary of Unofficial Preparations, Baltimore, 1906.
- N. N. R.*—New and Nonofficial Remedies, Chicago, 1910.
- B. P. C.*—British Pharmaceutical Codex, London, 1911.

DIGEST OF COMMENTS ON THE PHARMACOPŒIA OF THE UNITED STATES OF AMERICA, VIII, AND ON THE NATIONAL FORMULARY, III.¹

I. GENERAL COMMENTS.

1. LEGAL STATUS AND DEVELOPMENT.

1. PURE FOOD AND DRUGS LAW.

Hynson, Henry P., states that the food and drugs law of June 30, 1906, was the most wonderful and benevolent piece of legislation that has been enacted in modern times.—*Am. Druggist*, 1911, v. 58, p. 310.

Plaut, Albert, expresses the opinion that the food and drugs act has had something to do with the general increase in the price of drugs. No longer are drugs being sold which have been carelessly collected.—*Proc. N. W. D. A.*, 1911, p. 104.

Rusby, H. H., discusses the basic principles of the national food and drugs act.—*Drug. Circ.* 1911, v. 55, pp. 405-408. Also *Merck's Rep.* 1911, v. 20, pp. 285-287; *Proc. Vermont Pharm. Assoc.* 1911, p. 79-91; and *Bull. Pharm.* 1911, v. 25, p. 322-326.

Wiley, Harvey W., states that drugs are not the fetish in the medical world that they once were, but the purchaser is now fairly sure that whatever merit there may be in a drug, it is there when the drug is purchased.—*Oil, Paint and Drug Reporter*, 1911, v. 80, Oct. 9, p. 28κ.

Schneider, Albert, states that the work thus far done under the National as well as State pure drug laws has demonstrated that drug adulteration is practiced to an alarming degree.—*Tr. Am. M. Assoc. Sec. Pharm. & Therap.* 1911, p. 283. Also *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 315.

Lilly, J. K., reports that the indications are that the national pure food law is having a salutary effect. Foreign manufacturers realize that the United States Government officials are critical in their examination, and, furthermore, that only goods withstanding recognized tests will be admitted.—*Proc. N. W. D. A.* 1911, p. 161-162.

Ford, Charles M., states that the form of adulteration caused by filthy stores and utensils goes unchecked, largely because it does not come under the public eye and because of the smaller quantity relatively of drugs that are consumed as compared with foods.—*Drug. Circ.* 1911, v. 55, p. 625.

¹ Manuscript submitted Feb. 26, 1913.

Havenhill, L. D., points out that pharmacists as a class have given the food and drugs law their hearty support, and expresses the belief that the general outlook over the U. S. is encouraging.—*Proc. Kansas Pharm. Assoc.* 1911, p. 111.

Whitney, W. R., comments on the enactment of the pure food law and suggests that the average chemist and also the average citizen inform himself in regard to the object and the needs of the pure food law with a view to assisting those who are entrusted with its enforcement.—*J. Ind. & Eng. Chem.* 1911, v. 3, p. 625.

The Secretary of Agriculture reports that the inspection force of the Bureau of Chemistry collected 9,500 official samples of foods and drugs during the fiscal year, and 2,000 additional samples for use in scientific investigations relating to the enforcement of the food law.—*Ann. Rep. U. S. Dept. Agric.* 1911-12, p. 84.

Sanford, J. A., expresses the belief that the food and drug laws have come to stay; some of the laws are fine drawn and can be administered to a degree needlessly troublesome and beyond the demands of public safety.—*Pacific Pharm.* 1911, v. 5, p. 281.

An editorial (*Meyer Bros. Drug.* 1911, v. 32, p. 98) questions the constitutionality of the pure food law and states that while it is true that the food and drugs act has attracted an immense amount of attention and involved many persons in lawsuits, it is surprising that the activities in this direction have not caused more criticism of the law itself.

An editorial (*Drug Topics*, 1911, v. 26, p. 145) states that little by little the limitations of the food and drugs act are being disclosed by decisions of various Federal courts. Many of our officials, not only Federal, but State and local, are too prone to consider that their individual opinion is the law, instead of the mere dictum of an individual.

An editorial (*New Idea*, 1911, v. 33, p. 36), in discussing the enforcement of the food and drugs act, states that it is not tying any official's hands to provide that he shall proceed strictly according to law, and the food and drugs act has no more trustworthy friends than those who want to see its enforcement carried on in a legal manner.

The report of the A. Ph. A. Committee on Drug Market states that it is gratifying to note that in cases brought to court under the various food and drug laws, the courts are taking the view that in cases involving matters of opinion, competent testimony must prove beyond doubt the accuracy of the prosecution's opinion.—*Drug Topics*, 1911, v. 26, p. 276.

An editorial (*Drug. Circ.* 1911, v. 55, pp. 287-288) discusses the need for defining the scope of the food and drugs act and expresses the hope that an early definition of the terms of the act will be pronounced by the court of last resort.

An editorial (Drug Topics, 1911, v. 26, p. 65) states that while the drug trade as a whole favors the general principles of the food and drugs act and would look upon the setting aside of the act with regret, they would welcome the opportunity to place on the statute books a law that would make their duties under it more clear and free from the unnecessary expense and annoyances that the present act entails.

An editorial (J. Am. M. Assoc. 1911, v. 57, p. 29) discusses the message of President Taft with reference to the need of amendment to the food and drugs act as indicated by a recent decision of the Supreme Court. See also Pacific Pharm. 1911, v. 5, pp. 81-82, and Am. Druggist, 1911, v. 58, p. 374.

A news note (Oil, Paint and Drug Reporter, 1911, v. 79, June 26, p. 28D) calls attention to the President's drug fraud message and reports the substance of the Sherley bill and of the McCumber bill. See also editorial, *ibid.* p. 7.

An editorial (Phys. Drug News, 1911, v. 6, p. 206) states that the remedy for the present agitation for revision of the food and drug laws is for all in the drug trade to cooperate among themselves and with any movement designed for the elevation of the materia medica supply business, to the end that there may be devised proper laws for the regulation and control thereof.

Abbott, J. S., states that practically every State in the Union has passed what are commonly called pure-food laws. Some States, particularly the northern, have had pure-food laws for twenty years but most of the States have passed such laws since June 30, 1906, when a Federal food and drug law was passed.—Bull. Texas Bd. Health, 1911, v. 5, No. 6, p. 2.

An editorial (Am. Druggist, 1911, v. 58, p. 2) calls attention to the need for greater uniformity in the food and drug laws in the different States. See also p. 308.

An editorial (New Idea, 1911, v. 33, pp. 129-134) calls attention to some of the differences that exist in State drug laws at the present time.

Wetterstroem, Theodore D., discusses the desirability of having the Ohio food and drug law conform with the Federal law as to deviation from U. S. P. and N. F. drug standards and concludes that it would be far better if the Federal food and drugs act would conform with the Ohio statute in the above particular.—Proc. Ohio Pharm. Assoc. 1911, pp. 95-97.

Sayre, L. E., points out that there is great need for more uniform State legislation. Twenty-nine States have already passed food and drugs acts closely modeled upon the Federal law.—Drug. Circ. 1911, v. 55, p. 66.

An editorial (New Idea, 1911, v. 33, pp. 366-367) makes an appeal for greater uniformity between State and National food and drug legislation.

An editorial (*Am. Druggist*, 1911, v. 58, p. 206) calls attention to the proposed course of instruction in drug law by the Food and Drug Division of the Kentucky Agricultural Experiment Station.

An editorial (*ibid.*, v. 59, pp. 2-3) calls attention to the drug conference held under the auspices of the Food and Drug Division of the Kentucky Agricultural Station.

Asher, Philip, places the responsibility for adulteration alike upon the producer, importer, jobber, retailer, and consumer.—*Pract. Drug.* 1911, v. 29, Feb., p. 25.

Wilcox, Levi, thinks that the whole subject of adulteration of products not covered by the pure food and drugs act of 1906 will be eventually covered by a general statute forbidding misrepresentation of either the quality or quantity of chemicals, oils, or other commercial articles, either by advertisement, correspondence, or label.—*Proc. N. W. D. A.* 1911, p. 109-110.

Parry, Ernest J., presents a study in the comparative jurisdiction of the United States and Great Britain with reference to pure food and drugs.—*Am. Perf.* 1911-12, v. 6, pp. 6-8.

Dunlap, F. L., reports an investigation of the food laws of the United Kingdom and their administration.—*Bull. Bur. Chem., U. S. Dept. Agric.* 1911, No 143, pp. 42.

POISONS AND NARCOTICS.

Clement, Samuel M., jr., discusses antinarcotic legislation, calls attention to some of the earlier Federal laws dealing with opium and narcotics, and outlines the essential features of an interstate-traffic law and of a State antinarcotic law.—*Am. J. Pharm.* 1911, v. 83, pp. 67-77.

Sharp, Gordon, presents a short history of poisons and antidotes: Alexipharmaca, theriaca, electuaries, and confections.—*Pharm. J.* 1911, v. 86, pp. 549-552.

Attix, J. T., points out that there is much difficulty in defining poisonous substances. The requirement to define as poisonous the substances which in amounts of 5 grains or less are capable of producing disease or death is woefully deficient.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 32.

An editorial (*Pharm. J.* 1911, v. 86, pp. 235-236) calls attention to the report of deaths by poisoning included in the seventy-second annual report of the Registrar-General of births, deaths, and marriages in England and Wales for the year 1909.

An unsigned article (*Drug Topics*, 1911, v. 26, p. 323) points out that the shipment by mail of poisons and intoxicants is unlawful. See also *Natl. Druggist*, 1911, v. 41, pp. 333-334.

Ford, Charles M., states that it is surprising the number of druggists that do not see the importance of segregating the poisons in their

prescription case. It would seem that convenience, if no other consideration, would suggest that they be kept in a compartment by themselves.—*Drug. Circ.* 1911, v. 55, p. 626.

Sayre, L. E., states that a needed reform is the restriction and registration of the sale of poisons in various forms by agricultural, hardware, and industrial supply houses.—*Ibid.*, p. 66.

Levin, in a discussion of poisonous chemical products, presents a number of suggestions for workmen to avoid the occurrence and development of poisonings.—*Sc. Am. Suppl.* 1911, v. 72, pp. 62–63.

Schieffelin, William Jay, states that it is the duty of those engaged in the various branches of the drug business to be familiar with the facts regarding the effects of habit-forming drugs and also the extent of their use.—*Drug. Circ.* 1911, v. 55, p. 630.

A news note (*Oil, Paint and Drug Reporter*, 1911, v. 79, Jan. 23, p. 25) quotes Harvey W. Wiley as asserting that we are a drug-ridden people, and claiming that the large number of "dope" fiends is due to physicians prescribing harmful drugs when not necessary.

Heffner, E. F., expresses the belief that both the medical and pharmaceutical professions are to blame for the formation of drug habits.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 235.

Emanuel, Louis, points out that the task of controlling the improper use of habit-forming drugs is a difficult one, requiring national, State, and municipal legislation, together with the cooperation of the medical and pharmacal professions.—*Ibid.* p. 37.

An editorial (*Meyer Bro. Drug.* 1911, v. 32, p. 195) states that habit-forming drugs will be a matter only of history when the pharmacists of this country act in accord with the general sentiment of pharmacy and restrict the sale to absolutely legitimate uses and when the medical profession limits the prescribing of habit-forming drugs to necessary cases.

An editorial (*Drug. Circ.* 1911, v. 55, p. 179) comments on the relation of druggists to antinarcotic legislation and expresses the belief that any feasible bill intended to stop the illegitimate sale of habit-forming drugs is entitled to, and will receive, the support of organized pharmacists.

Eberle, Eugene G., thinks that the repeated violations of the antinarcotic laws and persistent nonobservance of the regulations applying to the sale of spirituous liquors should be punishable by revocation of the license to practice pharmacy.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 390.

A tentative food-inspection decision designed to regulate the sale of narcotic drugs is reprinted.—*N. A. R. D. Notes*, 1911–12, v. 13, p. 815.

A news note (*Drug. Circ.* 1911, v. 55, pp. 374–375) quotes the message of President Taft on the nostrum evil.

A news note (Oil, Paint and Drug Reporter, 1911, v. 79, Jan. 16, p. 10) discusses and reproduces the Foster antinarcotic bill.

A news note (Drug. Circ. 1911, v. 55, pp. 105-106) calls attention to and reproduces a bill (H. R. 25241) imposing a tax upon and regulating the production, manufacture, and distribution of certain habit-forming drugs. See also p. 330.

An editorial (Drug Topics, 1911, v. 26, p. 49) calls attention to the amendment to section 182 of the New York City Sanitary Code, relating to the restrictions on the sale of cocaine, opium, morphine, and derivatives of either of them. See also Drug. Circ. 1911, v. 55, p. 164.

Koch, Christopher, is reported as stating that illicit trafficking in cocaine has been revived in the Quaker City to an alarming extent—Drug. Circ. 1911, v. 55, p. 529.

Kellogg, J. H., in discussing the tendencies toward race degeneracy, states that poison habits are increasing, both in the number of enthralling drugs and the proportion of victims.—N. York M. J. 1911, v. 94, p. 528.

Blair, H. C., reports a resolution recommending that the Committees of Revision of the U. S. P. and N. F. eliminate compound preparations containing opium or coca, their derivatives and compounds, or in the event that they are retained in the revised editions, that these preparations indicate in their titles or names the presence of these substances.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 266.

3. PHARMACOPŒIA AS A LEGAL STANDARD.

Hynson, Henry P., states that few pharmacists remember that it was the food and drugs act that really discovered the United States Pharmacopœia and the National Formulary. These books were practically unknown quantities before that law went into effect, and truth on a label was a thing to be laughed at.—Am. Druggist, 1911, v. 58, p. 310.

An editorial (Meyer Bros. Drug. 1911, v. 32, p. 98) states that one of the objections that have been raised against the food and drugs act of June 30, 1906, is that it adopts a standard for the strength, purity, and identity of medicines which is not controlled by the Government. If this feature of the law is declared unconstitutional, it will awaken anew the interest in having the Pharmacopœia, the National Formulary, and possibly a general receipt book, published by the Government.

An editorial (Oil, Paint, and Drug Reporter, 1911, v. 79, Mar. 27, p. 7), in commenting on a recent decision upholding the validity of the food and drugs act, states that the makers of the Pharmacopœia nowhere and at no time undertake to say what shall constitute an

offense against the law, but they do say what shall constitute a good drug and what a bad one.

Murray, B. L., is reported as saying that no one could fully comply with the requirements of the U. S. P. because, although the best published, it is imperfect.—*Pharm. Era*, 1911, v. 44, p. 11.

Diekman, Geo. C., commenting on the subject of drug inspection criticizes the lack of methods of standardization in the U. S. P. and N. F.—*Ibid.* p. 167.

Dohme, A. R. L., asserts that in 1890 the U. S. P. could truly be said to have been more of a standard for strength and purity than a formulary, and in 1900 it became the standard of the United States for the strength and purity of the drugs contained in it.—*Proc. Virginia Pharm. Assoc.* 1911, p. 93.

Wetterstroem, Theodore D., expresses himself as believing in a rigid standard with a safe and sane enforcement of this standard. A wilful deviation from the standard for gain should always be severely dealt with, while a variation for the purpose of making the preparation better or more satisfactory could be handled under advisement, and the prevailing custom would dictate what course to pursue.—*Proc. Ohio Pharm. Assoc.* 1911, p. 96.

Wiley, H. W., reports that a number of the United States pharmacopœial products have been found below the requirements; that is, either deficient in alkaloidal strength, containing foreign material, or entirely spurious.—*Ann. Rep. U. S. Dept. Agric.* 1911-12, p. 424.

4. SUPPLEMENT TO THE PHARMACOPŒIA.

Remington, Joseph P., is reported as stating that the time has gone by when we should wait ten years to revise the United States Pharmacopœia. He thinks that the most useful thing to do would be to issue a supplement.—*Am. Druggist*, 1911, v. 59, p. 336.

McBride, David, suggests that some one get busy and get out a good reading course or a compend on the new U. S. P. and give us a thorough course of study covering the entire book and place it before us with the whys and wherefores attached.—*Northwestern Druggist*, 1911, v. 12, Oct., p. 31.

Meeker, C. H., feels that the system employed of setting standards may or may not be just, but that the standards as stated in the Pharmacopœia are unjust to the analyst, for the reason that no statement is made as to why such standards are set, or how the information was obtained, or any method given as to how the standard results should be obtained. He proposes an appendix or supplement in which these items shall be given.—*Ibid.*, p. 24.

Remington, Joseph P., is reported as being favorably inclined toward a proposition to issue bulletins, supplemental to the Phar-

macopœia, at such intervals as might be necessary to keep the text of the book abreast with the times.—Oil, Paint, and Drug Reporter, 1911, v. 80, Dec. 11, p. 28H.

Schimmel & Co. (Semi-Annual Report, 1911, Oct., p. 100) in commenting on the supplement to the Ph. Ndl. IV express the opinion that the publication of such supplements deserves high commendation. It would be desirable that very many pharmacopœia councils would follow the Dutch example.

5. UNITED STATES PHARMACOPEIAL CONVENTION.

A book review (Am. J. Pharm. 1911, v. 83, pp. 29-30) calls attention to the Abstract of Proceedings of the United States Pharmacopœial Convention, 1910.

An editorial (Meyer Bros. Drug. 1911, v. 32, p. 67) points out that while the Pharmacopœia is legally owned by the Convention and the business affairs managed by the Board of Trustees, it is really the property of the pharmacists and physicians of the United States. We may look for far greater publicity in all that pertains to pharmacopœial revision this decade than ever before.

An editorial (N. York M. J. 1911, v. 94, p. 489), in commenting on the new Pharmacopœia, states that the contest between the advocates of a smaller pharmacopœia and of a greater pharmacopœia, which was waged so warmly at the Pharmacopœial Convention in Washington in 1910, has resulted in a compromise, shown by the tentative list of admissions to and deletions from the Pharmacopœia by the Committee of Revision.

The report of the Board of Trustees of the U. S. P. C. presents a summary of the receipts and expenditures for the fiscal year 1910-1911.—Meyer Bros. Drug. 1911, v. 32, p. 177.

6. GENERAL PRINCIPLES.

Gilg, Ernst, in commenting on the drugs in the Ph. Germ. V., expresses the belief that it is about time that books of the importance of pharmacopœias be divorced from personal likes and dislikes, and that the scope at least be based on broad general principles that should be followed throughout.—Ber. pharm. Gesellsch. Berl. 1911, v. 21, p. 11.

Eberle, Eugene G., states that the revision of the U. S. P. is proceeding as rapidly as is possible for a work of such magnitude and responsibility. Due consideration has been given to reports and suggestions of the various bodies represented at the Convention, and the work of deciding upon the subjects presented in these reports is nearly finished; in addition, the questions left undecided by the Convention, which were referred to the Committee of Revision, have all been practically settled.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 395.

Alpers, Wm. C., in discussing the revision of the U. S. P., points out that the executive committee adopted as the basis for the admission of drugs the principle that an article should have therapeutic value or be a pharmaceutical necessity. Pharmaceutical necessity in this connection is held to mean articles essentially necessary in the production of official preparations that are recognized as having therapeutic value.—D.-A. Apoth.-Ztg. 1911-12, v. 32, p. 156.

An editorial (Drug. Circ. 1911, v. 55, p. 288) asks what was the purpose of the recommendation made by the 1910 Pharmacopœial Convention to the General Committee of Revision, which reads: "It is recommended that the General Committee of Revision make public for comment and criticism an abstract of new descriptions and standards and of changes in descriptions and standards before final adoption." Was it placation?

Murray, B. L., asserts that the U. S. P. of the future will be subject to painful care in preparation and must be faultless in every respect.—Pharm. Era. 1911, v. 44, p. 12.

7. PUBLICATION AND CONTROL.

Dohme, A. R. L., points out that the Pharmacopœia was started in 1820 by physicians, and represented practically a formulary and list of such remedies as were in general use by the physicians of that date.—Proc. Virginia Pharm. Assoc. 1911, p. 93.

Hunt, Reid, is reported as expressing the belief that, at present, the physician's part in the revision of the Pharmacopœia is but a minor one, and that much of what the better informed medical men might have to say is discounted by the fictitious value that is accorded to the reputed needs of the less conscientious, or less competent, practitioner who is willing to continue the use of substances that appear to have no recognized medicinal value.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 225.

An editorial (Am. Druggist, 1911, v. 59, p. 172) points out that the British Pharmacopœia is published by General Medical Council of the United Kingdom under act of Parliament, and that the physicians have jealously guarded this right.

White, Edmund, criticizes the General Medical Council for their attitude toward the pharmacists in the revision of the Ph. Brit. He refers to the income derived from its sale and thinks that the Committee of Reference should be paid for its work.—Pharm. J. 1911, v. 86, p. 143.

8. THE PHYSICIAN AND THE PHARMACOPŒIA.

Hunt, Reid, presents the report of the A. M. A. committee on the U. S. P.—Tr. Am. M. Assoc. Sec. Pharm. & Therap. 1911, pp. 9-10.

Schneider, Albert, recommends that physicians take a more active part in the work of revision.—*Ibid.* p. 281.

Solis-Cohen, Solomon, discusses the relation of the Pharmacopœia to the practice of medicine.—N. York M. J. 1911, v. 94, pp. 1009–1016. See also Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 400–417, 478; and Pract. Drug. 1911, v. 29, Nov., pp. 20, 23–28.

Wiley, H. W., asserts that considerable friction exists between the pharmacist and the physician. He considers it his duty to compose the two parties.—Pharm. Era, 1911, v. 44, p. 15.

Hunt, Reid, expresses the opinion that the reports submitted by the A. M. A. Committee on the U. S. P. were a true indication of the attitude of a large number of the members of that Association toward questions relating to the Pharmacopœia and materia medica generally.—Tr. Am. M. Assoc. Sec. Pharm. & Therap. 1911, p. 9.

Schneider, Albert, calls attention to the inadequate and insufficient instruction in materia medica in the medical schools of the United States and asserts that practically no progress has been made in the last century.—*Ibid.* p. 278. Also Bull. Am. Pharm. Assoc. 1911, v. 6, p. 310.

A book review (J. Am. M. Assoc. 1910, v. 57, p. 1398) commenting on the uses of the Digest of Comments on the Pharmacopœia and the National Formulary, points out that these bulletins serve to indicate the nature and the kind of remedies that are being used and actively discussed by physicians in different parts of the world. Not the least interesting of the truths that have been evidenced in this connection is the fact that the really active and efficient drugs are universally used by all classes of practitioners. It is also evident that the literature relating to the use of many of the less well-established drugs is based on observations that are so unreliable, or at least so questionable, that the mockery of their continuance as official articles must be apparent to every well-trained medical man.

A book review on the Ph. Germ. V. (Lancet, 1911, v. 180, p. 118) notes that the avowed intention, to make the book more useful to the physician, has been effected by the inclusion of references to the content of active ingredients in each official substance, and of the impurities to be revealed by the application of each prescribed test, so that the reader can at a glance judge of the strength and purity of any given substance.

Dohme, A. R. L., asserts that drugs like rubus, phytolacca, chima-phila, and lappa are in the Pharmacopœia because physicians in many parts of the country are using them.—Proc. Virginia Pharm. Assoc. 1911, p. 94.

An editorial (New Idea, 1911, v. 33, p. 37) ventures the opinion that it is not necessarily up to the U. S. P. committee to inform the medical profession about the therapeutic value of drugs. There are plenty of more or less authoritative works on that subject, and the medical colleges are supposed to give a certain amount of training along that line.

9. THE PHARMACOPŒIA AS A TEXT BOOK.

Dohme, A. R. L., asserts that the Pharmacopœia never was intended to be a textbook for anything, but merely in the early days a standard formulary of remedies used by physicians.—Proc. Virginia Pharm. Assoc. 1911, p. 93.

Eaton, H. E., asserts that very few of the druggists of Iowa have in their possession a late edition of either the Disp. U. S. P. or Natl. Formulary. Many are still making their preparations from an old edition or some book of formulas.—Proc. Iowa Pharm. Assoc. 1911, p. 151.

Bradt, Warren L., reports that the New York State Board of Pharmacy adopted a rule that every pharmacy and drug store shall own and have on file at all times the eighth decennial revision of the Pharmacopœia and the latest edition of the National Formulary, and no registration certificate shall be issued a pharmacy or drug store till it complies with this rule.—Proc. New York Pharm. Assoc. 1911, p. 32. See also Am. J. Pharm. 1911, v. 83, pp. 95-96.

Cook, Alfred N., advises druggists to get the latest Pharmacopœia and National Formulary, if they have not them already. Some of the U. S. P. and N. F. preparations are sure to be illegal if druggists do not have the latest editions of these books.—Bull. South Dakota Food & Drug Dept. 1911, No. 23, p. 2.

An editorial (Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 56-67) discusses the use of the U. S. P. and N. F. in drug stores, states that one would think that, simply as a matter of safety if nothing more, all retail druggists would have the latest editions of the U. S. Pharmacopœia and National Formulary in their stores, because in no other way can they know their legal responsibilities; and yet it is an open secret that many do not.

Diekman, Geo. C., discusses the validity of the requirement made by the New York State Board of Pharmacy that pharmacists in that State must have a copy of the U. S. P. and N. F.—*Ibid.* pp. 139-140.

Wilbert, M. I., points out that in Germany the pharmacopœia is distinctly a book for the guidance of the apothecary, who is responsible and is held responsible for the medicaments dispensed on physicians' prescriptions and sold for household purposes. In our own country the Pharmacopœia is used as a law book for the manufacture and sale of medicaments, and, up to the present time at least, has had little or no influence in controlling the nature of the substances as they reach the consumer.—*Ibid.* p. 186.

Hübner, Otto, in a review of the Ph. Germ. V, states that the objectionable cook-book style of the German Pharmacopœia has finally been done away with and that the present pharmacopœia will be recognized not alone as a law book, but also as the basis for instruction of future generations of pharmacists.—Fortschr. Chem. 1911, v. 4, p. 148.

10. U. S. P. CONVENTION REPRESENTATION.

An editorial (Meyer Bros. Drug. 1911, v. 32, p. 130) points out that the attendance of physicians at the U. S. P. C. was disappointingly small. It was practically limited to teachers of medicine and the number of practitioners of medicine elected to the Committee of Revision is insignificant.

An editorial (Drug. Circ. 1911, v. 55, p. 164) states that the forthcoming revision will be the tenth decennial issue of the United States Pharmacopœia, and its final publication will mark the end of the first century of real Pharmacopœia making in this country.

11. VALUE OF CRITICISM.

Murray, B. L., in commenting on the shortcomings of the U. S. P.' states that, in order to avoid in the new Pharmacopœia the mistakes we have made in the old one, it is appropriate to bring such mistakes out into the light of day, and search for means by which they may be remedied.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 11.

Plaut, Albert, is reported as expressing the opinion that out of the much criticism to which the Pharmacopœia has been subjected since the enactment of the Federal food and drugs law, would come a new Pharmacopœia decidedly an improvement.—*Ibid.* p. 29.

Remington, Joseph P., thinks that it might save needless effort on the part of those who discuss proposed changes in the Pharmacopœia for them first to ascertain from the chairman of the Committee of Revision whether or not the change which they advocate had already been decided upon.—Oil, Paint, and Drug Reporter, 1911, v. 80, Dec. 11, p. 28H.

In an interview with the chairman of the Revision Committee, the latter calls attention to the tardy aid that had been forthcoming from the Government, and says, in part: It was hoped that the work of the United States Public Health and Marine-Hospital Service in collecting and classifying the comments on the Pharmacopœia would be of material assistance to the Committee of Revision, but if this work continues at its present rate of progress it is expected that the Pharmacopœia will be published before the later volumes of the Government made "Digest" are available. However, as the three volumes that are already out cover the three years immediately following the publication of the present Pharmacopœia, they doubtless contain abstracts of or references to most of the comments that have been made on that book, as most of those who had any complaints to make or criticisms to offer doubtless relieved their minds before the Pharmacopœia was over three years old.—Drug. Circ. 1911, v. 55, p. 164.

An unsigned critique (Pharm. J. 1911, v. 87, p. 430) of the Report of the Committee of Reference in Pharmacy to the General Council

asserts that it is desirable from every point of view that alterations which are likely to be made in the pharmacopœia should be criticized before, rather than after, their final adoption. See also p. 877.

An editorial (Chem. & Drug. 1911, v. 79, p. 17) comments on the international character of the Digest of Comments (Bull. 75, Hyg. Lab.) and its usefulness to the revisers of other pharmacopœias, as well as its general utility.

Diekman, George C., presents the report of the committee on pharmacopœial revision and calls attention to the completeness of Hygienic Laboratory Bulletin No. 75.—Proc. New York Pharm. Assoc. 1911, pp. 78–93.

A book review (Ber. Pharm. Gesellsch. 1911, v. 21, pp. 151–152) calls attention to the Digest of Comments on the Pharmacopœia of the United States for the calendar year ending December 31, 1906, and points out a number of features that might well be profitably embodied in the Jahresbericht.

An editorial note (Chem. & Drug. Australas. 1911, v. 26, p. 88) calls attention to the Digest of Comments on the Pharmacopœia of the United States of America, and states that every school of pharmacy should certainly have a copy of this volume, and the better students should have it brought under their notice to make them realize the work involved in compiling a pharmacopœia, and the strong flood of investigation which is always flowing.

12. COMMITTEE OF REVISION.

Fleet, C. B., is reported as saying that the Committee of Revision is a very large body of the most scientific men in the United States, meeting at irregular intervals. The committee is always glad to get suggestions from the most obscure druggists.—Proc. Virginia Pharm. Assoc. 1911, p. 24.

Lilly, J. K., points out that the forthcoming Pharmacopœia will no doubt represent the mature judgment of the very able Revision Committee, and its appearance is awaited with interest by the entire drug fraternity.—Proc. N. W. D. A. 1911, p. 159.

Remington, Joseph P., announces that the work of revising the Pharmacopœia is directly carried on by an executive committee of revision, made up of fifteen members of the general committee.—Meyer Bros. Drug. 1911, v. 32, p. 297.

The names of the several subcommittees of the U. S. P. Committee of Revision, also the executive committee, are reprinted.—*Ibid.* p. 76.

Plaut, Albert, quotes a distinguished authority to the effect that "A more representative Committee of Revision could not have been selected." He is sure that its members work hard. Foreign pharmacists and pharmacologists are looking forward to the next U. S. P.

with the greatest interest and expect that it will be the best there is.—Pharm. Era, 1911, v. 44, p. 12.

An editorial (Drug. Circ. 1911, v. 55, p. 163) states that one of the reasons for expecting more prompt work is based upon a change made in the size of the Revision Committee.

An editorial (Meyer Bros. Drug. 1911, v. 32, p. 130) states that the number of practitioners of medicine elected to the Committee of Revision is insignificant.

The editor (Southern Pharm. J. 1910-11, v. 3, pp. 200, 236, and 274) calls upon all pharmacists to take an active part in the revision of the Pharmacopœia. The book is for those actively engaged and not for theorists; therefore no one ought more to be concerned, and the opinion of no class will receive more considerate attention than the dispenser. The Revision Committee will look forward to the meetings of the State associations in anticipation of many papers which will enlighten them.

13. NATURE AND PROGRESS OF REVISION.

An editorial (Drug. Circ. 1911, v. 55, p. 163) outlines the method employed in revising the Pharmacopœia.

Kraemer, Henry, states that we are only at the beginning of the work on the ninth revision and that the chairman is to be congratulated on the work as it has been carried on up to this time.—Oil, Paint, and Drug Reporter, 1911, v. 80, Oct. 23, p. 9.

Alpers, Wm. C., comments on the revision of the Pharmacopœia and calls attention to a number of the changes that have been proposed.—D.-A. Apoth.-Ztg. 1911-12, v. 32, pp. 155-157.

An editorial (Bull. Pharm. 1911, v. 25, p. 49) notes that the work of Pharmacopœia revision is apparently proceeding with a commendable rate of speed.

The American Correspondent (Chem. & Drug. 1911, v. 78, p. 263) states that the work of revising the U. S. P. is progressing as fast as possible, but something of a stumblingblock has been met in the difficulty of agreeing upon what particular drugs and preparations shall be recognized in the book.

Remington, Joseph P., is reported as stating that the Executive Committee of the Committee of Revision has just completed going over the final report of the subcommittee on scope and that this report has been approved with comparatively little change.—Oil, Paint, and Drug Reporter, 1911, v. 80, July 31, p. 9.

Beringer and Raubenheimer are reported as stating that, despite the fact that they are members of the Executive Committee of Revision, they were unaware that the question of cutting out or inserting additional articles was still before the Executive Committee.—*Ibid.* Oct. 23, p. 9.

Nixon, C. F., is reported as criticizing the manner in which the work of the committee on the revision of the Pharmacopœia is carried on. "The retail druggists seem to be sold out again to Raymond by the Committee."—N. A. R. D. Notes, 1911-12, v. 13, p. 702.

An editorial (Drug. Circ. 1911, v. 55, pp. 163-164) reviews the progress that is being made in the revision of the United States Pharmacopœia.

Plaut, Albert, states that the N. W. D. A. has a committee at work developing data for U. S. P. revision, and this committee has all the laboratories in the country at its service. The present descriptions of drugs are couched in such language that the average pharmacist requires a dictionary to understand the technical descriptive terms. The U. S. P. should use popular terms.—Pharm. Era, 1911, v. 44, p. 12.

Stevens, A. B., states that, now the Pharmacopœia is under revision and is to be used as a legal standard, every standard adopted should be carefully tested, and this not only by a single person, but by several experts.—Pacific Pharm. 1911, v. 5, p. 85.

The A. Ph. A. Committee on Drug Market expresses the belief that the next Pharmacopœia will be a great improvement. The valuable Digest of Comments issued by the Hygienic Laboratory and the wide range of experience in the Drug Laboratory with present processes should place in the hands of the Committee of Revision more practical data than have hitherto been available.—Drug Topics, 1911, v. 26, p. 178.

2. SCOPE.

1. NATURE AND CONTENT OF THE PHARMACOPOEIA.

An editorial (N. A. R. D. Notes, 1911, v. 12, p. 1469), in commenting on the list of articles to be recognized in the U. S. P., ninth revision, states that this is the first time in the history of pharmacopœial revision that any part of the labors of the committee has been made public before the actual publication of the complete work. Only the names of the articles are given in this first report, standards and tests being not as yet made public, but they will undoubtedly soon follow.

Gilg, Ernst, expresses the belief that it is about time that books of the importance of pharmacopœias be divorced from personal likes and dislikes and that the scope at least be based on broad general principles that should be followed throughout.—Ber. pharm. Gesellsch. 1911, v. 21, p. 11.

Solis-Cohen, Solomon, discusses the scope of the Pharmacopœia and points out that it is a book of pharmacal standards and neither an advisory nor a minatory work on therapeutics. Admission or rejection should depend on the voice of the whole profession, and not on

the voice of teachers or leaders only, whether pharmacologists, clinicians, or therapeutists.—Critic and Guide, 1911, v. 14, pp. 26–32. See also Bull. Am. Pharm. Assoc. 1911, v. 6, p. 402, and Drug. Circ. 1911, v. 55, p. 149.

Dohme, A. R. L., discusses the functions of the Pharmacopœia and recommends the broadening of the scope of the book, so as to make it as it should be, a standard for the drugs used in any section of this country.—Proc. Virginia Pharm. Assoc. 1911, p. 93–94.

Wood, H. C., jr., thinks that to put into the book everything that everybody wanted in it would make it so unwieldy that a derrick would be required to take it down from the shelf, to say nothing of the expense of printing it. The tentative list of additions and deletions seems to him to be the result of a reasonable compromise.—Oil, Paint, and Drug Reporter, 1911, v. 80, Dec. 11, p. 28H.

An editorial (New Idea, 1911, v. 33, p. 37), in commenting on the scope of the Pharmacopœia, points out that a slim pharmacopœia would perhaps relieve some drug importers of no little embarrassment; but doubts if it would appeal as strongly to the medical profession as the present one.

Kraemer, Henry, thinks that the test of a pharmacopœia is the getting rid of the obsolete, and declares that no previous revision compares in this respect to the ninth.—Oil, Paint, and Drug Reporter, 1911, v. 80, Oct. 23, p. 9.

Murray, B. L., agrees with H. W. Wiley that “drugs should only find their way into the U. S. P. for therapeutic use.”—Pharm. Era, 1911, v. 44, p. 12.

Diekman, George C., reports that a summary of the 117,000 prescriptions includes reports from 122 individuals, representing 57 States, and embodies a total of 2,223 titles.—Proc. New York Pharm. Assoc. 1911, p. 89.

Summary of 117,000 prescriptions.

[Comparison of six groups in the number of articles of each group, number of times used, the percentage ratio of the articles of each group, and the percentage ratio of times used.]

	Number of articles.	Number of times used.	Percentage of articles.	Percentage of times used.
1. U. S. Pharmacopœia.....	970	162,770	43.0	83.0
2. National Formulary.....	319	10,765	14.5	5.5
3. New and Non-official Remedies.....	160	11,783	7.5	6.0
4. Proprietarys.....	475	7,640	22.0	4.2
5. Drugs and preparations.....	210	1,269	9.0	.8
6. Chemicals and preparations.....	89	941	4.0	.5
Total.....	2,223	196,158	100.0	100.0

THE FIFTEEN SUBSTANCES MOST FREQUENTLY PRESCRIBED, IN ORDER OF TIMES USED.

	Times pre- scribed.	Total.	In each 1,000.	Pre- scribed once in—
			<i>Times.</i>	<i>Times.</i>
1. Nux vomica.....	4,764	7,889	67	15
Strychnine.....	3,125			
2. Opium.....	2,922	7,480	64	16
Morphine.....	1,458			
Codeine.....	3,100			
3. Digestive ferments.....	3,500	6,500	56	18
Pepsin.....	3,000			
4. Quinine and salts.....	4,400		40	25
5. Calomel.....	4,130		36	28
6. Sodium bicarbonate.....	3,400		30	33
7. Phenyl salicylate (salol).....	3,360		29	35
8. Phenacetin.....	2,600		23	43
9. Bismuth subnitrate.....	2,574		22	45
10. Cascara sagrada.....	2,600		22	45
11. Potassium iodide.....	2,300		19	52
12. Sodium salicylate.....	2,276		19	52
13. Caffeine.....	2,049		17	60
14. Arsenic.....	1,900		16	62
15. Acetanilide.....	1,500		12.5	80

—Proc. New York Pharm. Assoc. 1911, p. 90.

Schneider, Albert, expresses the belief that the U. S. P., N. F., dispensaries, and our standard text-books on materia medica are encumbered with a large number of questionable remedies that have no place in the treatment of disease. Fully 50 per cent of the remedies described in these works could be omitted with results highly beneficial to the human race.—Tr. Am. M. Assoc. Sec. Pharm. & Therap. 1911, p. 282.

Hunt, Reid, states that the various reports submitted by committees of the A. M. A. were practically unanimous in expressing a desire for a pharmacopœia which should include only drugs of established value and recommended the deletion of a large number of drugs of secondary or of doubtful value.—*Ibid.* p. 10.

The editor of the "Therapeutics" column (J. Am. M. Assoc. 1911, v. 56, p. 967) asserts that of all drugs to be officialized, inferior cardiac drugs should be the last. It is a dangerous thing to give standard and standing to a heart tonic that is unworthy, or to give the prescriber a sense of false security as to the therapeutic usefulness of a drug by the backing of fifty picked men, and such backing is the physician's interpretation of the Pharmacopœia.

Dohme, A. R. L., asserts that the sentiment to delete inactive drugs from the Pharmacopœia, is based upon a misconception of the function of the Pharmacopœia, which since the passage of the pure food and drugs act in 1906, has been made a legal standard for chemicals and drugs and foods in the United States, and as such

should cover by its definitions, tests, etc., as many if not all those drugs and chemicals which are in use in this country to any appreciable extent.—*Proc. Virginia Pharm. Assoc.* 1911, p. 94.

Weinstein, Joseph, thinks that articles with few claims of therapeutic action should be thrown out only after much consideration. He thinks that the U. S. P. should be made larger rather than smaller.—*Pharm. Era*, 1911, v. 44, p. 12.

The Kings County Pharmaceutical Society presents lists of articles which should respectively be retained in, and deleted from, the Pharmacopœia.—*Ibid.* p. 502.

An editorial (*N. York M. J.* 1911, v. 94, p. 489) comments on the proposed lists of admissions to and deletions from the Pharmacopœia, and points out that the list, as published, constitutes a defeat for the little pharmacopœia party.

Wilbert, M. I., notes that the tentative report of the Executive Committee of Revision on the scope of the U. S. P. IX has attracted considerable attention, and that the comments which have appeared up to the present time have been quite favorable.—*Am. J. Pharm.* 1911, v. 83, p. 566.

Remington, Joseph P., is reported as stating that criticisms on the published list of deletions and additions amount to naught, as the published list is by no means final.—*Oil, Paint, and Drug Reporter*, 1911, v. 80, Oct. 23, p. 9.

2. A LIMITED MATERIA MEDICA.

Hunt, Reid, states that in response to the demands for authoritative information in regard to reliable medicaments the Council on Pharmacy and Chemistry of the American Medical Association has undertaken the preparation of a list of medicaments of established value with such descriptions as may seem desirable. The reports secured by the A. M. A. Committee on the Pharmacopœia will, no doubt, serve as a basis for the proposed publication, which will probably be known as the "American Medical Codex."—*Tr. Am. M. Assoc. Sec. Pharm. & Therap.* 1911, p. 10.

Bevan, Arthur Dean, is reported as saying that a limited list of drug preparations containing only those which are most useful and important is of particular value to medical education at the present time. With the overcrowded condition of the medical curriculum, it is highly important that the small amount of time which the student has to devote to the study of drug preparations should be largely spent in obtaining a thorough knowledge of the more important drugs rather than in the obtaining of a superficial knowledge of all drugs, the majority of which are of little or no value.—*Am. J. Pharm.* 1911, v. 83, p. 282. See also editorial, *J. Am. M. Assoc.* 1911, v. 56, p. 1269.

An editorial (*Meyer Bros. Drug.* 1911, v. 32, p. 131) points out that the Association of American Medical Colleges, at its meeting

held in February, 1911, urged the adoption, not only by schools of medicine, but also by licensing boards, of a *materia medica* list, which will enable medical students and candidates for registration to concentrate their attention on medicines which are generally recognized as the most serviceable in the list of medicines now in use.

"R. E. P.," discussing the proposed A. M. A. list of important medicaments, declares that should the list be limited, the teachers in the medical and pharmaceutical colleges will be able to cover the individual items with more thoroughness and demand more complete knowledge from the student; the present large *materia medica* and the crowded curricula of the colleges affording the student only a smattering of knowledge, which he finds difficulty in retaining, unless the item happens to be one which he adopts into his "vocabulary" when beginning practice.—*Midl. Drug.* 1911, v. 45, p. 376.

An editorial (*N. York M. J.* 1911, v. 93, p. 791) commends the limited *materia medica* list of the National Confederation of State Medical Examining and Licensing Boards, and adds that such a compromise between the present necessarily superficial consideration of a large part of the official drugs on the one hand, and possible dogmatic restriction on the other hand, seems to be a very happy move in the progress toward "a more sane therapy."

An editorial note (*Nat. Elect. M. Assoc. Quart.* 1910-11, v. 2, pp. 144-146), in commenting on the report of the committee on *materia medica* of the National Confederation of State Medical Examining and Licensing Boards and of the Council on Medical Education of the American Medical Association, states that this report beats any quiz compend to a "frazzle." Nothing will so tend to restrict the teaching of therapeutics as the limitation of examinations to certain drugs. The report is certainly inimical to medicine. Examiners are spreading themselves over the entire field of literary attainments and all the specialties of medicine.

The report of the A. Ph. A. Committee on Drug Market suggests that the Association prepare a list of drugs which are still used by physicians, but which are known to be of no value, and expresses the belief that the subject is almost of importance enough to warrant the appointment of a committee on inert drugs.—*Drug Topics*, 1911, v. 26, p. 276.

Chaney, Edwin Norman, states that Homœopathy is too broad a field, and uses too many remedies, to commit them to memory.—*J. Am. Inst. Homœop.* 1911, v. 3, p. 806.

An editorial (*Ecclectic Med. Glean.* 1911, v. 7, p. 92) states that Scudder early recognized the value of a thorough knowledge of drugs, even if but a few in number. He fully realized the inability to carry in one's head an extensive knowledge of myriads of drugs. A physician who thoroughly knows 100 drugs ought to be a successful prescriber.

3. NOMENCLATURE.

Kahn, Joseph, reports the opinion that the U. S. P. titles, if long, should be simplified.—Proc. New York Pharm. Assoc. 1911, p. 84.

Remington, Joseph P., is reported as suggesting that changes or modifications of the Pharmacopœia should not involve an alteration of the nomenclature, which would entail trouble, expense, and confusion with respect to labels.—Oil, Paint and Drug Reporter, 1911, v. 80, December 11, p. 28H. See also Am. Druggist, 1911, v. 59, p. 336.

An editorial (Chem. & Drug. 1911, v. 79, p. 18), commenting on change in the Digest of Comments, in the spelling of the Pharmacopœial title "syrup" to "sirup," expresses the hope that this does not mean that the United States Pharmacopœia is to adopt the new spelling. See also p. 225.

The A. Ph. A. Committee on Drug Market urges the chemical and wholesale drug houses to drop, as far as possible, the use of the misleading term "C. P. chemicals," adopting in lieu thereof the terms "U. S. P." or "Medicinally pure."—Drug Topics, 1911, v. 26, p. 276.

An unsigned article calls attention to a number of chemical misnomers, and points out that copperas contains no copper, salt of lemon has nothing to do with the lemon tree, and carbolic acid is not an acid, but a phenol.—Sc. Am. Suppl. 1911, v. 71, p. 38.

An editorial (Am. Druggist, 1911, v. 59, p. 2) discusses the similarity in the names of drugs and medicines and chemicals, and points out the desirability of concerted action to prevent so far as possible any further increase in the number of names that are likely to be confusing. See also p. 170.

Mayo, Caswell A., discusses the desirability of establishing an international committee on pharmaceutical nomenclature, and presents a list of names of widely differing substances that are likely to be confused, one for the other.—*Ibid.* pp. 173-174.

Remington, Joseph P., endorses the objections that have been made to the dangerous similarity in pharmaceutical nomenclature.—*Ibid.* p. 86.

Hofman, J. J., in commenting on the proposed international committee on pharmaceutical nomenclature points out that the difference between the nomenclature in different countries frequently gives rise to much trouble to chemists and pharmacists.—*Ibid.* p. 259.

Tunncliffe is strongly of the opinion that the fancy names given to some products should be regulated by authority. He is opposed to therapeutically suggestive names.—Pharm. J. 1911, v. 86, p. 437.

Tschirch, A., discusses the desirability of system in the terminology of pharmaco-chemical substances, especially the carbohydrate group.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 303-312. Also Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, pp. 444-449.

Diekman, George C., reports that all therapeutically suggestive titles are to be dropped from the N. F., and in case where the preparation is retained, other more appropriate names will be selected.—Proc. New York Pharm. Assoc. 1911, p. 91.

Gehe & Co. (Handelsbericht, 1911, pp. 50–51), in commenting on the Ph. Ross. VI, point out that the Latin nomenclature corresponds very closely with that employed in Austria, Germany, and Switzerland, with perhaps the single exception that magnesium is designated *magnium*. See also Am. J. Pharm. 1911, v. 83, p. 28.

Bettink, H. Wefers, discusses the nomenclature of the Ph. Germ. V and calls attention to some of the titles that differ from those included in the Ph. Ndl. IV.—Pharm. Weekblad, 1911, v. 48, p. 213.

True, Rodney H., in discussing the botanical nomenclature of the Ph. Germ. V, deplors the fact that botanists generally are provincial in their ideas and unwilling to develop or accept a system of nomenclature that would do away with the present confusion regarding botanical names.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 184.

Beringer, George M., notes that in the official titles of the Ph. Germ. V many of the old time-honored Latinized vernacular names are retained and such mediæval titles as “Borax,” “Cerussa,” “Lithargyrum,” and “Minium,” still appear in this Twentieth Century revision.—Proc. New Jersey Pharm. Assoc. 1911, p. 76. Also Am. J. Pharm. 1911, v. 83, p. 327.

Wilbert, M. I., points out that the introduction to the Ph. Germ. V states that, where the scientific designation for a new remedy is more convenient or in general use, it has been adopted; in other cases the protected name was chosen for the title followed by the chemical name and the protected name also appears beneath the scientific title as a subtitle, to indicate that the protected preparation must in every respect fulfil the requirements set forth in the Pharmacopœia.—Am. J. Pharm. 1911, v. 83, p. 129.

Kroeber, Ludwig, calls attention to the difficulties involved in the relabeling of shop containers with the official Ph. Germ. V non-proprietary titles.—Apoth.-Ztg. 1911, v. 26, p. 403. See also Pharm. Ztg. 1911, v. 56, p. 16.

An editorial (Pharm. Ztg. 1911, v. 56, pp. 571–572, 581–582) discusses proprietary rights in trade-marked names for medicines in Germany.

Kahn, Joseph, reports the recommendation that synonyms be reintroduced into the U. S. P.—Proc. New York Pharm. Assoc. 1911, p. 85.

Amos, F. J., thinks that synonyms help but very little and are often misleading, very inconsistent, unscientific, and require no little time to learn. He thinks druggists should endeavor to discourage the use of synonyms and that in the course of time they can be eliminated.—Proc. Georgia Pharm. Assoc. 1911, p. 94–97.

Beringer, George M., points out that an extensive list of synonyms and less used names is one of the important tables included in the appendix of the Ph. Germ. V.—*Am. J. Pharm.* 1911, v. 83, p. 335.

4. COST AND SIZE.

Rusby, H. H., dilating upon the need of money for pharmacopœial work, urges an increase in the price of the book by sums of 25 cents, as required for the purpose.—*Pharm. Era*, 1911, v. 44, p. 141.

Caspari, Chas., jr., states that unfortunately the U. S. P., Ninth Revision, will perhaps be larger than the Eighth Revision and larger than the Pharmacopœia of any other country, in spite of the large number of deletions and the efforts made to reduce its size.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 613.

Wood, H. C., jr., suggests that the Pharmacopœia be made as heretofore to meet the needs of pharmacists and physicians, and not to please chemists, manufacturers, drug examiners, and others.—*Oil, Paint, and Drug Reporter*, 1911, v. 80, Dec. 11, p. 28H.

An editorial (*N. York M. J.* 1911, v. 94, p. 489), in commenting on the proposed list of drugs to which State board examinations for medical license shall be confined, expresses the belief that this solution of the problem of the size of the Pharmacopœia is a happy one.

Eaton, H. E., reports that a chemist was in a town of 5,000 people and wanted to look up something in connection with his work. He went into all five drug stores of the town to look at a late edition of the U. S. P. or Disp. and could not find one.—*Proc. Iowa Pharm. Assoc.* 1911, p. 151.

Cheatham, T. A., asserts that many of the druggists of Georgia are not progressive enough to buy a Pharmacopœia or National Formulary, and are still adhering to the old formulas.—*Proc. Georgia Pharm. Assoc.* 1911, p. 36.

5. PUBLICITY.

An editorial (*Drug Circ.* 1911, v. 55, p. 288) states that, so far as present indications are a guide, the Committee of Revision as a body and the members as individuals have shown a decided preference for silence with regard to their work. Unnecessary secrecy, it has been agreed by the members of the committee, is not becoming in connection with work of such a public character as is the revision of the legal drug standards.

An editorial (*Meyer Bros. Drug.* 1911, v. 32, p. 131) comments on what constitutes unnecessary secrecy in the revision of the U. S. P., and asserts that the resolution adopted by the U. S. P. Convention in regard to publicity is merely a recommendation, and not an instruction.

An editorial (*Bull. Pharm.* 1911, v. 25, p. 2) comments on H. W. Wiley's utterance on the subject of publicity as of particular significance, and adds that his position is eminently sound. See also *Nat. Druggist*, 1911, v. 41, p. 80.

An editorial note (*N. A. R. D. Notes*, 1911, v. 12, p. 904), commenting on the evident noncompliance with the U. S. P. Convention instruction to give publicity to the progress of the work of revision, expresses doubt as to whether the instruction has been forgotten or neglected, or whether it was in the nature of a political promise, and concludes that a statement on this subject from the committee to the pharmaceutical press of the country would undoubtedly be welcome.

Schimmel & Co. (*Semi-Annual Report*, Oct. 1911, pp. 109-110) emphasize the desirability of submitting the draft of the Pharmacopœia to public comment so that incorrect statements might be rectified before publication of the book. They quote Kobert, who, in criticizing the *Ph. Germ. V*, says that if the mystery-mongering which was unfortunately still regarded as necessary in the preliminary work of the Pharmacopœia were done away with once and for all, it would be desirable for critical as well as for other reasons.

Wilbert, M. I., points out that the British Pharmaceutical Codex Revision Committee is regularly publishing suggested new formulæ and alterations with the request that they be reviewed by pharmacists, and that criticisms and further suggestions be forwarded to the office of the committee.—*Am. J. Pharm.* 1911, v. 83, p. 130.

An editorial (*Chem. & Drug*. 1911, v. 79, p. 351), commenting on the progress of British pharmacopœial revision, notes that the committee has invited criticisms of its work by public discussions, and that it has availed itself of the suggestions received.

Kahn, Joseph, reports the recommendation that public notice of all proposals for changes in the Pharmacopœia be given in the pharmaceutical press before adoption.—*Proc. New York Pharm. Assoc.* 1911, p. 84.

Remington, Joseph P., announces that the Committee on Revision has decided for the first time in the history of pharmacopœial work to give partial publicity to the work in progress.—*Meyer Bros. Drug*. 1911, v. 32, p. 297.

The Kings County Pharmaceutical Society adopted a resolution commending the publicity given the work of the Committee of Revision.—*Pharm. Era*, 1911, v. 44, p. 502. See also *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 608.

An editorial (*N. A. R. D. Notes*, 1911, v. 12, p. 1469), in commenting on the list of articles to be included in the U. S. P., 9th revision, states that up to the present time only the names of the articles have been published, and expresses the belief that the requirements for standards and tests will undoubtedly soon follow.

Caspari, Chas., jr., expresses the belief that the publicity given the list of admissions and deletions would bring out expressions of opinion in time to remedy errors.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 612.

An editorial (*D.-A. Apoth.-Ztg.* 1911–12, v. 32, p. 119), in commenting on the preliminary publication of formulas to be included in the National Formulary, commends the action of the committee, and points out that this action should tend to disarm much of the unnecessary criticism that has heretofore appeared after the publication of one or the other of the official standards.

Beringer, George M., in order to give the desired publicity to the work of the committee on standards for unofficial drugs and chemical products, requests the pharmaceutical press to present the matter and asks that any suggestions as to standards to be adopted be forwarded to him.—*Pharm. Era*, 1911, v. 44, p. 4.

6. TIME OF PUBLICATION.

An editorial (*Drug. Circ.* 1911, v. 55, p. 163) states that, barring accidents and unforeseen complications, the new U. S. P. will be on the press before the expiration of half the time it took to get its immediate predecessor ready for the printer.

Remington, Joseph P., states that if he knew when the Pharmacopœia would be ready he would be more pleased than anybody else to make the knowledge public property.—*Pharm. Era*, 1911, v. 44, p. 498.

An editorial (*Bull. Pharm.* 1911, v. 25, p. 4) notes that H. W. Wiley has expressed the opinion that the ninth revision of the Pharmacopœia may be brought out in May, 1912. It adds that he is new to pharmacopœial work and may be reckoning without his host.

An editorial (*Drug. Circ.* 1911, v. 55, p. 288) states that we are to have our new Pharmacopœia next year. So at least we have been promised by the powers that be. That leaves but little time for consideration to be given by critics to proposed changes or additions, to say nothing of time for the consideration of criticisms by the Committee of Revision.

Xrayser II thinks that all the omens point to a reissue of the U. S. P. before the new Ph. Brit. makes its appearance, and asks if there is no inducement which can be dangled before the General Medical Council.—*Chem. & Drug.* 1911, v. 79, p. 413.

An editorial (*Drug. Circ.* 1911, v. 55, p. 342), commenting on a report of expenses incurred for pharmacopœial work, applies the rule of three to the items of expense of ten years ago, with similar items for the present decade, and concludes that copies of the ninth revision of the United States Pharmacopœia should be ready for distribution about January 1, 1913.

7. DOSES.

Raubenheimer, Otto, thinks that the suggestion to retain average doses in the U. S. P. is a serious mistake. A table of safe maximum single and daily doses should be given.—*Proc. New York Pharm. Assoc.* 1911, p. 95.

Reed, Boardman, in a paper on the improvement of our therapeutics, discusses, among other things, the subject of dosage.—*J. Am. M. Assoc.* 1911, v. 57, p. 1608.

Lascoff, J. Leon, discusses the variation in the capacity of teaspoons, and asserts that the only way to remedy matters is to advocate the use of accurately marked medicine glasses, verified and certified.—*Am. Druggist*, 1911, v. 58, p. 67. See also editorial, p. 63.

Hommell, P. E., discusses the doses of some bitter fluid extracts and tinctures of the U. S. P. He expresses himself as being very much in favor of a minimum and maximum dosage.—*Merck's Rep.* 1911, v. 20, p. 195.

An editorial (*Eclectic Med. Glean.* 1911, v. 7, p. 18) quotes Scudder as pointing out that dosage is a very important subject for thought, and the general fact that an excess of medicine is used hardly needs proving, for every physician frequently gives remedies when there is no positive advantage to be obtained from their use.

Fisher, Edgar A., states that while in the popular mind the small dose is "homeopathy," it is by no means an essential feature in the prescription. The only requisite is that the dose shall be sufficiently small not to aggravate the symptoms for which it is administered.—*J. Therap. & Diet.* 1911, v. 5, p. 200.

Bettink, H. Wefers, presents a table showing the maximum single and daily doses included in the *Ph. Germ.* V and the *Ph. Ndl.* IV.—*Pharm. Weekblad*, 1911, v. 48, pp. 596–598.

Tables of maximum single and daily doses have been included in the following pharmacopœias:

Ph. Austr. VIII, pp. 442–445.

Ph. Belg. III, pp. 249–251.

Ph. Dan. VII, pp. 417–419.

Ph. Fr. V, pp. 893–899.

Ph. Germ. V, pp. 608–612.

Ph. Helv. IV, pp. 554–557.

Ph. Hung. III, pp. 383–386.

Ph. Ital. III, pp. 397–403.

Ph. Japon. III, pp. 394–397.

Ph. Ndl. IV, pp. I–XXXVI.

Also Supplement.

Ph. Ross. VI, pp. 548–553.

Ph. Serb. II, pp. 284–286.

Ph. Svec. IX, pp. 377–378.

8. ANTIDOTES.

Sharp, Gordon, presents a short history of poisons and antidotes: *Alexipharmaea, theriaca, electuaries, and confections*.—*Pharm. J.* 1911, v. 86, pp. 549–552.

Kahn, Joseph, reports the recommendation that a table of antidotes be added in the Appendix of the U. S. P.—*Proc. New York Pharm. Assoc.* 1911, p. 84.

Dewey, W. A., asserts that olive oil is one of the best general antidotes to poisoning.—*Hahnemann. Month.* 1911, v. 46, p. 631.

9. WEIGHTS AND MEASURES.

Brown, Linwood A., notes that, though the U. S. P. VIII has been out since 1905, and all the quantities called for in that book are in the metric system, not more than 10 per cent of the druggists in Kentucky have metric weights and measures in their stores. The unfortunate part of it is they do not know the simplicity, accuracy, and ease of working with the metric system.—*Proc. Kentucky Pharm. Assoc.* 1911, p. 95.

Wimmer, Curt P., discusses some of the shortcomings of the retail druggist so far as weights and measures are concerned.—*Proc. New York Pharm. Assoc.* 1911, pp. 262–264.

Desha, L. J., points out the need for securing accurate weights, also the desirability of having all scales in good working order and supported on a level and steady table.—*Proc. Tennessee Pharm. Assoc.* 1911, p. 25.

The London Correspondent (*J. Am. M. Assoc.* 1911, v. 56, p. 1586) notes that the Council of the British Medical Association recommends that the teaching of pharmacology, both theoretical and practical, shall henceforth be according to the metric system, and calls attention to the ingenious suggestion of R. C. Buist for the writing of prescriptions in the metric system. See also *Pharm. J.* 1911, v. 86, pp. 579, 585, and *Chem. & Drug.* 1911, v. 78, p. 670.

An editorial (*Am. Med.* 1911, v. 17, p. 8) states that the constantly increasing opposition to the metric system on the part of "practical" men is what our scientists should have expected in their unwise efforts to force the system on those unable to use it.

Stern, David, discusses the usefulness of the metric system of weights and measures to the dentist. He also calls attention to some of the many branches of industry in which the metric system is now used exclusively.—*Dental Cosmos*, 1911, v. 53, pp. 60–68.

An editorial note (*Pharm. J.* 1911, v. 87, p. 318) regrets the fact that the National Formulary Committee of Revision has decided not to substitute the term "mil" for the contraction "c. c." in the next edition of the Formulary.

Lyons, A. B., thinks that mil, as a designation for the one-thousandth part of a liter, is preferable to cc.—*Am. Druggist*, 1911, v. 59, p. 44.

Raubenheimer, Otto, discusses the relative advantages of mil and cc as a designation for the one-thousandth part of a liter, and points out that the term mil can very easily be mistaken for the well-known milligramme and that such misunderstanding might have a serious effect.—*Ibid.* p. 76. See also editorial note, *Chem. & Drug*, 1911, v. 79, p. 353.

An editorial note (*Pharm. J.* 1911, v. 87, p. 550) credits J. F. Liversseege with priority in the attempt to define and restrict the use of the expression "w/v."

Lang, Jos., presents a table showing the equivalents of metric weights in the English avoirdupois.—*Schweiz. Wchnschr. Chem. u. Pharm.* 1911, v. 49, pp. 391-392.

Porter, John, outlines a proposed system of weights and measures, based on existing British units of weight, volume, and measurement.—*Chem. Trade J.* 1911, v. 49, pp. 266-267.

Heffner, E. F., reports an examination of the capacity of prescription vials, and points out that his results show a variation in some cases of 15 per cent over or under capacity.—*Proc. Pennsylvania Pharm. Assoc.* 1911, pp. 195-196.

Coblentz, Virgil (*New York World*, March 26), comments on carelessness in weighing and measuring and intentional short weighing, as evidenced in the filled prescriptions presented to him for analysis.—*Pract. Drug.* 1911, v. 29, Apr. p. 28. See also *J. Ind. & Eng. Chem.* 1911, v. 3, p. 541.

Cook, Alfred N., suggests that pharmacists be careful in measuring and weighing, and states that they sometimes introduce an error into their preparations by not allowing bottles and measuring vessels to drain thoroughly after rinsing with water or alcohol.—*Bull. South Dakota Food & Drug Dept.* 1911, No. 23, p. 2.

Holtkamp, Hermann, describes and illustrates a new measuring cylinder, contracted at the upper end so as to facilitate the accurate measuring of larger quantities of liquid.—*Apoth.-Ztg.* 1911, v. 26, p. 901.

The Imperial German Regulation for the standardization of weights and measures is reprinted.—*Pharm. Ztg.* 1911, v. 56, pp. 1000-1001.

10. OBJECTS AND USES.

An editorial (*Bull. Pharm.* 1911, v. 25, p. 137) suggests, as a method of popularizing the Pharmacopœia, that druggists have the letters "U. S. P." on the labels of packages wherever the contents permit it. This would prove more effective even than the statement of the actual strength upon the label.

Schneider, Albert, suggests that the American Medical Association undertake an educational propaganda on behalf of the United States Pharmacopœia and National Formulary.—Tr. Am. M. Assoc. Sec. Pharm. & Therap. 1911, p. 11.

An editorial (Meyer Bros. Drug. 1911, v. 32, p. 130), in discussing the desirability of physicians taking more interest in the Pharmacopœia, states that as far back as 1908 an informal conference of teachers in the medical schools of Philadelphia adopted the following resolution:

Resolved, That it is of the utmost importance for accuracy in prescriptions, and in the treatment of disease, that students of medicine be instructed fully as to those portions of the United States Pharmacopœia which are of value to the practitioner.

Asher, Philip, states that the charge that the Pharmacopœia was gotten up in the interest of the manufacturing concerns can only be refuted by producing a work that is preeminently practical.—Pract. Drug. 1911, v. 29, Feb. p. 24.

Wilbert, M. I., asserts that the U. S. P., while theoretically a complete and highly commendable work, is a sealed book to many, if not the majority, of retail druggists, and comparatively few are in a position to or capable of applying the various tests embodied therein.—Am. J. Pharm. 1911, v. 83, p. 447.

Brown, Linwood A., states that Drug Inspector Porter reports that a large number of Kentucky druggists are without one or the other, or both, the U. S. P. VIII and N. F. III, and some druggists with a Dispensatory of the vintage of 1880 or 1890, and a very few reference works on chemistry, materia medica, pharmacy, etc. He says he does not mean that a Dispensatory and Pharmacy are not desirable works to have, but being unofficial they can not take the place of the U. S. P. or N. F. in a legal sense.—Proc. Kentucky Pharm. Assoc. 1911, p. 91.

An editorial (Drug. Circ. 1911, v. 55, p. 619) states that the dispensing pharmacist who tries to economize by using his fifteen-year-old Dispensatory, and getting his National Formulary recipes out of the back of a book which does not give the formulas of the latest edition, and gives such as it does contain in a lame and unsatisfactory manner, is saving at the spigot and losing at the bung.

Whorton, C., recommends that retail druggists study and apply the Pharmacopœia to their practical daily use.—Proc. Alabama Pharm. Assoc. 1911, p. 121.

Raubenheimer, Otto, calls attention to a recent ruling by the New York State Board of Pharmacy that every pharmacy and drug store shall own and have on file at all times the eighth decennial revision of the Pharmacopœia and the latest edition of the National Formulary, and no registration certificate shall be issued for a pharmacy

or drug store till this rule is complied with.—*Am. Druggist*, 1911, v. 58, p. 44.

Motter, Murray Galt, is reported as characterizing the present Pharmacopœia of the United States as an illustration of "would-be science," the National Formulary as "a hybrid between science and commercialism," and the N. N. R. as "a sop to the commercial Cerberus."—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 224.

11. ADDITIONS AND DELETIONS.

An editorial (*Drug. Circ.* 1911, v. 55, p. 163) states that it is not too early to predict that many old-time remedies will no longer be official when the new Pharmacopœia is promulgated and that many names will be found added to the list of official drugs.

Dohme, A. R. L., asserts that the sentiment to delete from the Pharmacopœia all drugs whose therapeutic efficiency could not be demonstrated scientifically is the expression of the pharmacologists of the country representing a vast minority of the medical profession, and as a rule an element thereof which is not in active practice.—*Proc. Virginia Pharm. Assoc.* 1911, p. 94.

Whitworth, F. C., thinks that it is doubtless true that many valuable drugs are kept out of the Pharmacopœia too long, their value not being appreciated early enough.—*Rocky Mountain Druggist*, 1911, v. 25, Jan., p. 27.

Diekman, George C., reports resolutions presented by the Medical Society of the State of New York to the United States Pharmacopœial Convention recommending the deletion of obsolete drugs and the limitation of preparations of drugs so as to avoid unnecessary duplication.—*Proc. New York Pharm. Assoc.* 1911, pp. 83-84.

Hunt, Reid, points out that full and complete reports on the U. S. P. had been made to the Pharmacopœial Convention and by that body submitted to the General Committee of Revision.—*Tr. Am. M. Assoc. Sec. Pharm. & Therap.* 1911, p. 9.

Hommell, Philemon E., makes several suggestions as to what preparations should be dropped from the U. S. P. and N. F.—*Pract. Drug.* 1911, v. 29, July, p. 28.

Diekman, George C., enumerates a number of articles recommended for inclusion in the U. S. P. IX; he also presents a list of articles recommended for deletion.—*Proc. New York Pharm. Assoc.* 1911, pp. 79-80.

Craig, Hugh, reports comments on a number of articles to be added to, or deleted from, the U. S. P.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, pp. 607-609.

Schneider, Albert, expresses the opinion that the weeding out of unnecessary drugs from the U. S. P. is primarily the work of physicians, and he sincerely hopes that every inert and useless drug will

be eliminated from the next issue.—Tr. Am. M. Assoc. Sec. Pharm. & Therap. 1911, p. 282.

Xrayser II states that the proposed additions to the U. S. P. are not numerous, but they are an interesting selection, and he is not sure if the English could do worse than adopt them as the standard for the new Ph. Brit.—Chem. & Drug. 1911, v. 79, p. 413.

Caspari, Chas., jr., is reported as saying that the list of admissions and deletions originated with the subcommittee on scope, composed of physicians and pharmacists, the majority being physicians, and that they considered each item separately, and were guided in their discussion by therapeutic usefulness and pharmaceutical necessity.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 612. Also Meyer Bros. Drug. 1911, v. 32, p. 331.

Alpers, Wm. C., regrets that such popular drugs as calamus, calendula, chimaphila, chirata, cypripedium, lappa, quercus, tamarindus, and others should be deleted from the Pharmacopœia.—D.-A. Apoth.-Ztg. 1911-12, v. 32, p. 157.

An editorial (Pharm. Era, 1911, v. 44, p. 428), commenting on the lists thus far submitted for the new U. S. P. and N. F., states that while possibly not as extensive as some had hoped for, they reflect progress and not a little conservative discrimination.

Wood, H. C., jr., thinks that not enough articles have been left out of the Pharmacopœia, as physicians want a book that will represent the forefront of medical practice.—Oil, Paint, and Drug Reporter, 1911, v. 80, Oct. 23, p. 9.

Remington, Joseph P., is reported as stating that the list of additions and deletions already made public is only tentative and that already changes have been made.—*Ibid.* p. 9.

The lists of articles to be dropped from, and of articles proposed for admission to, the U. S. P. are reprinted.—Am. J. Pharm. 1911, v. 83, pp. 500-502. See also Drug. Circ. 1911, v. 55, pp. 500-503; Am. Druggist, 1911, v. 59, pp. 107-109; N. York M. J. 1911, v. 94, pp. 504-506, and other journals.

List of articles to be dropped from the Pharmacopœia.

Acetum opii.
Acidum camphoricum.
Acidum sulphurosum.
Alumini sulphas.
Argenti nitras mitigatus.
Bismuthi citras.
Bismuthi et ammonii citras.
Calamus.
Cassia fistula.
Cataplasma kaolini.
Ceratum camphoræ.
Ceratum plumbi subacetatis.

Ceri oxalas.
Chimaphila.
Chirata.
Cinnaldehydum.
Colchici cormus.
Collodium stypticum.
Confectio sennæ.
Conium.
Cusso.
Cypripedium.
Emplastrum hydrargyri.
Emplastrum opii.

Emplastrum saponis.
 Emulsum chloroformi.
 Emulsum olei morrhue cum hypophosphitibus.
 Extractum colchici cormi.
 Extractum digitalis.
 Extractum hæmatoxyli.
 Extractum kramerie.
 Extractum leptandree.
 Extractum malti.
 Extractum scopulæ.
 Extractum sumbul.
 Ferri citras.
 Ferri et ammonii sulphas.
 Ferri et ammonii tartras.
 Ferri et potassii tartras.
 Ferri et strychninæ citras.
 Ferri hydroxidum.
 Ferri hypophosphis.
 Ficus.
 Fluidextractum calami.
 Fluidextractum calumbæ.
 Fluidextractum chimaphilæ.
 Fluidextractum chiratæ.
 Fluidextractum conii.
 Fluidextractum cubebæ.
 Fluidextractum cypripedii.
 Fluidextractum digitalis.
 Fluidextractum euonymi.
 Fluidextractum eupatorii.
 Fluidextractum geranii.
 Fluidextractum lappæ.
 Fluidextractum leptandree.
 Fluidextractum lupulini.
 Fluidextractum matico.
 Fluidextractum mezerei.
 Fluidextractum pareiræ.
 Fluidextractum phytolacæ.
 Fluidextractum quassie.
 Fluidextractum quercus.
 Fluidextractum quillajæ.
 Fluidextractum rosæ.
 Fluidextractum rubi.
 Fluidextractum sabinæ.
 Fluidextractum sanguinarie.
 Fluidextractum scopulæ.
 Fluidextractum scutellarie.
 Fluidextractum stillingie.
 Fluidextractum stramonii.
 Fluidextractum veratri.
 Geranium.
 Glyceritum ferri, quininæ et strychninæ phosphatum.
 Hamamelidis cortex.

Hedeoma.
 Hyocyaminæ sulphas.
 Infusum pruni virginianæ.
 Iodolum.
 Lappa.
 Lithii benzoas.
 Lithii salicylas.
 Mangani sulphas.
 Mastiche.
 Matico.
 Mistura ferri composita.
 Mistura rhei et sodæ.
 Mucilago ulmi.
 Naphthalenum.
 Oleatum quininæ.
 Oleoresina lupulini.
 Oleum adipis.
 Oleum æthereum.
 Oleum chenopodii.
 Oleum copaibæ.
 Oleum erigerontis.
 Oleum sabinæ.
 Pilulæ aloes et mastiches.
 Pilulæ aloes et myrrhæ.
 Pilulæ laxativæ compositæ.
 Pilulæ opii.
 Pilulæ podophylli, belladonnæ et capsici.
 Plumbi iodidum.
 Plumbi nitras.
 Potassii sulphas.
 Prunum.
 Pulvis morphinæ compositus.
 Quercus.
 Quillaja.
 Rubus.
 Sabina.
 Santonica.
 Scammonium.
 Scoparius.
 Scutellaria.
 Sodii bisulphis.
 Sodii nitras.
 Sodii Pyrophosphas.
 Spiritus ætheris compositus.
 Sulphuris iodidum.
 Syrupus ferri, quininæ et strychninæ phosphatum.
 Syrupus hypophosphitum compositus.
 Syrupus kramerie.
 Syrupus rubi.
 Tamarindus.
 Tinctura aloes et myrrhæ.
 Tinctura cardamomi.
 Tinctura gallæ.

Tinctura ipecacuanhæ et opii.
 Tincturæ herbarum recentium.
 Trochisci gambir.
 Trochisci glycyrrhizæ et opii.
 Trochisci kramerizæ.
 Trochisci santonini.
 Unguentum gallæ.
 Unguentum hydrargyri oxidi rubri.
 Unguentum potassii iodidi.
 Unguentum veratrinæ.
 Unguentum zinci stearatis.
 Viburnum opulus.

Vinum album.
 Vinum cocæ.
 Vinum colchici seminis.
 Vinum ergotæ.
 Vinum ferri.
 Vinum ferri amarum.
 Vinum ipecacuanhæ.
 Vinum opii.
 Vinum rubrum.
 Zea.
 Zinci bromidum.
 Zinci iodidum.

New articles proposed for admission to the U. S. Pharmacopœia IX.

Ammonium bifluoride.
 Antitetanic serum.
 Apiol.
 Aspidospermine.
 Bismuth beta-naphthol.
 Buchu (long).
 Caffeine sodio-benzoate.
 Calcium chloride (hydrated crystals).
 Calcium glycerophosphate.
 Calcium lactate.
 Carbonic acid (compressed).
 Condurango.
 Creosote carbonate.
 Crocus.
 Diacetyl-morphine.
 Diacetyl-morphine hydrochloride.
 Diastase.
 Emplastrum cantharidis.
 Erythrol tetranitrate.
 Fluorescein.

Hydrastine hydrochloride.
 Mercury salicylate.
 Milk of magnesia.
 Milk of bismuth.
 Oxygen (compressed).
 Picric acid.
 Phenolphthalein.
 Pine needle oil.
 Potassa sulphurata.
 Quinine and urea hydrochloride.
 Saccharin, sodium salt of.
 Sodium cacodylate.
 Sodium glycerophosphate.
 Sodium perborate.
 Solution of hydrogen dioxide (30 per cent).
 Theobromine sodio-salicylate.
 Trioxymethylene.
 Uranium nitrate.
 Vaccine virus

There are thirty-eight articles still under consideration for admission.—*Am. J. Pharm.* 1911, v. 83, pp. 500–502.

12. PURITY AND STRENGTH.

Coblentz, Virgil, is reported as outlining the history of the purity rubric of the U. S. P.—*Meyer Bro. Drug.* 1911, v. 32, p. 363.

Sadtler, S. P., asserts that the term "Rubric" applies to the first statement of purity given in the *Pharmacopœia*, and not to the later tests.—*Northwestern Druggist*, 1911, v. 12, Nov., p. 24.

Rusby, H. H., asserts that the declaratory statement of the U. S. P., to the effect that the standards of purity and strength prescribed are intended to apply to substances which are used solely for medicinal purposes and when professedly bought, sold, or dispensed as such, allows great room for wrongdoing.—*Midl. Drug.* 1911, v. 45, p. 345.

Coblentz, Virgil, states that the general effect of the purity rubric is not to decrease the quality of chemicals but to cause manufacturers

to compete with each other to produce the best grades. He feels that our standards should be not too severe, and that, when a reasonable standard is once set, its enforcement should be rigidly carried out by the authorities.—*Northwestern Druggist*, 1911, v. 12, November, p. 24.

Roberts, Norman, criticizes the U. S. P. definition of a colorless liquid.—*Midl. Drug*, 1911, v. 45, p. 285.

Murray, B. L., in commenting on the purity rubric, points out that the *Pharmacopœia* sometimes presents purity standards for articles but stops there and does not tell how to test them. He thinks that it is a pretty generally recognized principle that when purity rubrics are given, laying down fixed requirements of purity, it is in fairness necessary to lay down also corresponding methods of analysis.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, pp. 15–16. See also *Pharm. Era*, 1911, v. 44, p. 12.

Rusby, H. H., criticizes the use of such descriptive terms as "an excess of," "a large addition," "a trace," etc. He suggests that "trace" should mean not more than a tenth of 1 per cent; "a small amount," less than the allowable limit; "a slight excess," an excess over the allowable limit so small that it may, circumstances and conditions being favorable, be overlooked; "much" or "a large quantity," so much in excess of permission that it could not possibly be tolerated; "an enormous amount," an excess so large as to call for some special attention being given to the case. These terms, however, should not replace proper quantitative determinations when called for.—*Pharm. Era*, 1911, v. 44, p. 140.

Kebler, Lyman F., suggests that as a general principle, particularly for chemicals, a purity rubric with definite limitations for poisonous contaminations would perhaps prove most satisfactory.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 34.

An editorial (*Ibid.* p. 5) notes that while U. S. P. standards should be as high as possible, it is equally important that they shall not be so high as to be commercially impossible. Conditions now are very different than formerly. The U. S. *Pharmacopœia* is a book of standards under food and drugs acts which the courts regard as criminal statutes and construe literally.

Remington, Joseph P., asserts that the U. S. P. is the only *pharmacopœia* in the world that has a purity rubric. It is only due to the chemical manufacturer that he should have a limit, a maximum limit, of what is called innocuous impurity.—*Northwestern Druggist*, 1911, v. 12, Mar., p. 26.

Beringer, George M., states that the purity rubric has been adopted in the *Ph. Germ. V* and is quite generally given in connection with the chemical products. It is also extended to many of the drugs and even to some of the galenicals.—*Proc. New Jersey Pharm. Assoc.* 1911, p. 75. See also *Am. J. Pharm.* 1911, v. 83, p. 327.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 496) points out that the percentage of any constituent which is intended to be shown by a quantitative test is stated in figures instead of leaving it to be discovered from some limit of a titration figure, or similar value, as was formerly done.

The Pharmaceutical Journal (1911, v. 87, p. 878), commenting on the reports of the Committee of Reference in Pharmacy, notes that, whereas some salts are required to be 99 per cent pure, no directions are given as to how that degree of purity is to be ascertained.

Remington, Joseph P., asserts that purification and continual purification is necessary in order to get up to the U. S. P. standard. The drug that is purified only once, or maybe not at all, can be sold to the dispensing doctors. The few houses who cater to the dispensing doctor's trade sell without a guarantee, or if with a guarantee it amounts to nothing.—Northwestern Druggist, 1911, v. 12, Mar., p. 26.

An editorial (Pharm. Era, 1911, v. 44, p. 136) asserts that, if the U. S. P. is to be a help, and not an obstacle in professional and industrial progress, the requirements of purity must not entail hardships on any class of workers concerned. The manufacturer should be allowed to use cheap processes provided the product conforms to standard. A slight revision downward certainly seems called for.

Tankard, Arnold Rowsby, thinks that by far the most desirable addition in many cases is the inclusion of limits for poisonous impurities, such as arsenic and lead.—Pharm. J. 1911, v. 87, p. 73.

Brown, Linwood A., points out that a large number of tests for purity, described in the Pharmacopœia, may be carried out in an ordinary 6-inch test tube and not require a large amount of material nor any expensive apparatus.—Proc. Kentucky Pharm. Assoc. 1911, p. 96.

Stevens, A. B., discusses pharmacopœial standardization and outlines the need for greater uniformity in standard temperature for solubilities and for volumetric solutions, volumetric standards, and the purity rubric.—Pacific Pharm. 1911, v. 5, pp. 86–87.

Kahn, Joseph, reports the opinion that all tests and standards should be tried and verified by expert chemists and all formulas for the preparation of galenicals be tried and verified by retail pharmacists before adoption.—Proc. New York Pharm. Assoc. 1911, p. 84.

Schneider, Albert, thinks that every drug should be tested as to quality and purity before it is administered to a patient.—Tr. Am. M. Assoc. Sec. Pharm. & Therap. 1911, p. 283.

Coblentz, Virgil, discusses the general results of the analysis of 230 prescriptions and concludes that if druggists would buy only from reliable firms and employ competent, conscientious assistants they would be in a position to render such service as the public has a right to expect.—J. Ind. & Eng. Chem. 1911, v. 3, pp. 540–542. See also Bull. Am. Pharm. Assoc. 1911, v. 6, p. 29.

Ford, Charles M., declares that inspection of drug stores at the present time is practically a farce and might better never be attempted. Condition of premises and merchandise, equipment, and methods of dispensing and compounding are all factors for determining whether or not adulteration and misbranding are present.—Drug. Circ. 1911, v. 55, p. 626.

13. ATOMIC WEIGHTS.

Martindale, W. Harrison, presents a table showing the atomic weights current in various pharmacopœias, compared with the international atomic weights, 1911, and expresses the opinion that we do not require atomic weights to second or third place of decimals, and that for all practical purposes a "rounded off" revision would be desirable.—Pharm. J. 1911, v. 86, pp. 178–179.

Atomic weights current in various pharmacopœias compared with international weights, 1912.

	Int. Wts., 1912.	Ph. Brit. 1898.	Ph. Germ. 1910	Ph. Fr. 1908.	Ph. Helv. 1907.	Ph. Hung. 1909.	Ph. Ndl. 1905.	Ph. Hisp. 1905.	U. S. P. 1906.
Aluminium.....	27.1	26.90	27.1	27	27.1	27.1	27.1	27.1	26.9
Antimony.....	120.2	119.00	120.2	120	120.2	120.2	120.2	120.2	119.3
Arsenic.....	74.96	74.50	74.96	75	75.0	75.0	75.0	75.0	74.4
Barium.....	137.37	136.40	137.37	137	137.4	137.4	137.4	137.4	136.4
Bismuth.....	208.0	207.30	208.0	208	208.5	208.0	208.5	208.5	206.9
Boron.....	11.0	10.85	11.0	11	11.0	11.0	11.0	11.0	10.9
Bromine.....	79.92	79.35	79.92	80	79.96	79.96	79.96	79.96	79.36
Calcium.....	40.07	39.71	40.09	40	40.1	40.1	40.1	40.1	39.8
Carbon.....	12.00	11.91	12.0	12	12.00	12.00	12.00	12.0	11.91
Cerium.....	140.25	139.20	.....	.....	140.25	.....	.....	140.0	139.2
Chlorine.....	35.46	35.19	35.46	35.5	35.45	35.45	35.45	35.45	35.18
Chromium.....	52.0	51.74	52.0	52	52.1	52.1	52.1	52.1	51.7
Copper.....	63.57	63.12	63.57	63.5	63.6	63.6	.....	63.6	63.1
Gold.....	197.2	195.70	.....	197	197.2	.....	.....	197.2	195.7
Hydrogen.....	1.008	1.0	1.008	1	1.008	1.008	1.008	1.008	1.000
Iodine.....	126.92	125.90	126.92	127	126.85	126.97	126.97	126.85	125.9
Iron.....	55.84	55.60	55.85	56	55.9	55.9	55.9	55.9	55.5
Lead.....	207.10	205.35	207.1	207	206.9	206.9	206.9	206.9	205.35
Lithium.....	6.94	6.97	7.00	7	7.03	7.03	7.03	7.03	6.96
Magnesium.....	24.32	24.18	24.32	24	24.36	24.36	24.36	24.36	24.18
Manganese.....	54.93	54.52	54.93	55	55.0	55.0	55.0	55.0	54.6
Mercury.....	200.6	196.80	200.0	200	200.0	200.0	200.0	200.0	198.5
Nitrogen.....	14.01	13.94	14.01	14	14.04	14.01	14.04	14.04	13.93
Oxygen.....	16.00	15.88	16.00	16	16.00	16.00	16.00	16.00	15.88
Phosphorus.....	31.04	30.80	31.0	31	31.0	31.0	31.0	31.0	30.77
Platinum.....	195.2	193.30	195.0	194	194.8	.....	.....	194.8	193.3
Potassium.....	39.10	38.83	39.1	39	39.15	39.15	39.15	39.15	38.86
Silicon.....	28.3	.....	28.3	28	28.4	28.4	.....	28.4	28.2
Silver.....	107.88	107.11	107.88	108	107.93	107.93	107.93	107.93	107.12
Sodium.....	23.00	22.88	23.0	23	23.05	23.05	23.05	23.05	22.88
Strontium.....	87.63	.....	.....	87.5	87.6	.....	.....	87.6	86.94
Sulphur.....	32.07	31.82	32.07	32	32.06	32.06	32.06	32.06	31.83
Tin.....	118.0	118.20	118.0	.....	119.0	119.0	.....	119.0	118.1
Zinc.....	65.37	64.91	65.37	65	65.4	65.4	65.4	65.4	64.9

—Pharm. J. Lond. 1911, v. 86, p. 178.

Adams, Elliot Quincy, presents a modification of the periodic table, and points out that the elements can be arranged in six periods, each including some power of two elements or groups of elements.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 684–688.

Hansen, C. J. T., presents a brief note on the reform of chemical and physical calculations, and F. W. Clarke's eighteenth annual report of the committee on atomic weights.—*Chem. News*, 1911, v. 104, p. 232.

Clarke, F. W., presents the eighteenth annual report of the committee on atomic weights, and reviews the determinations published in 1910.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 261–270. See also *Ber. deutsch. chem. Gesellsch.* 1911, v. 44, pp. 1–5; *Ztschr. physik. Chem.* 1911, v. 75, pp. 378–382, and other journals.

Woodhead, John E., contributes a paper on atomic weights, together with a table showing the international weights, 1911, "rounded off" weights, and percentage of error.—*Pharm. J.* 1911, v. 86, p. 365.

Beringer, George M., points out that in the *Ph. Germ. V.* the international list of atomic weights for 1910 is adopted as the basis for the chemical formulas, molecular weights, and the analytical calculations. This is the first revision of the German Pharmacopœia in which chemical formulas are given.—*Am. J. Pharm.* 1911, v. 83, p. 328.

An editorial note (*Pharm. J.* 1911, v. 87, p. 703) calls attention to the new atomic weights for 1912, and states that in but two cases are the changes large. Mercury and tantalum are now given as 200.6 and 181.5, respectively.

The annual report of the international committee on atomic weights with the international atomic weight table for 1912 is reprinted.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 1639–1642. See also *J. Chem. Soc. Lond.* 1911, v. 99, pp. 1867–1870; *Chem. Ztg.* 1911, v. 35, pp. 1237–1238; *Drug. Circ.* 1911, v. 55, p. 689; *Ztschr. physik. Chem.* 1911–1912, v. 78, pp. 500–503; *Apoth.-Ztg.* 1911, v. 26, p. 940, and other journals.

International atomic weights, 1912.

	Symbol.	Atomic weight.		Symbol.	Atomic weight.
Aluminium.....	Al	27.1	Calcium.....	Ca	40.07
Antimony.....	Sb	120.2	Carbon.....	C	12.00
Argon.....	A	39.88	Cerium.....	Ce	140.25
Arsenic.....	As	74.96	Chlorine.....	Cl	35.46
Barium.....	Ba	137.37	Chromium.....	Cr	52.0
Bismuth.....	Bi	208.0	Cobalt.....	Co	58.97
Boron.....	B	11.0	Columbium.....	Cb	93.5
Bromine.....	Br	79.92	Copper.....	Cu	63.57
Cadmium.....	Cd	112.40	Dysprosium.....	Dy	162.5
Cæsium.....	Cs	132.81	Erbium.....	Er	167.7

International atomic weights, 1912—Continued.

	Symbol.	Atomic weight.		Symbol.	Atomic weight.
Europium.....	Eu	152.0	Platinum.....	Pt	195.2
Fluorine.....	F	19.0	Potassium.....	K	39.10
Gadolinium.....	Gd	157.3	Praseodymium.....	Pr	140.6
Gallium.....	Ga	69.9	Radium.....	Ra	226.4
Germanium.....	Ge	72.5	Rhodium.....	Rh	102.9
Glucinum.....	Gl	9.1	Rubidium.....	Rb	85.45
Gold.....	Au	197.2	Ruthenium.....	Ru	101.7
Helium.....	He	3.99	Samarium.....	Sa	150.4
Hydrogen.....	H	1.008	Scandium.....	Sc	44.1
Indium.....	In	114.8	Selenium.....	Se	79.2
Iodine.....	I	126.92	Silicon.....	Si	28.3
Iridium.....	Ir	193.1	Silver.....	Ag	107.88
Iron.....	Fe	55.84	Sodium.....	Na	23.00
Krypton.....	Kr	82.92	Strontium.....	Sr	87.63
Lanthanum.....	La	139.0	Sulphur.....	S	32.07
Lead.....	Pb	207.10	Tantalum.....	Ta	181.5
Lithium.....	Li	6.94	Tellurium.....	Te	127.5
Lutecium.....	Lu	174.0	Terbium.....	Tb	159.2
Magnesium.....	Mg	24.32	Thallium.....	Tl	204.0
Manganese.....	Mn	54.93	Thorium.....	Th	232.4
Mercury.....	Hg	200.6	Thulium.....	Tm	168.5
Molybdenum.....	Mo	96.0	Tin.....	Sn	119.0
Neodymium.....	Nd	144.3	Titanium.....	Ti	48.1
Neon.....	Ne	20.2	Tungsten.....	W	184.0
Nickel.....	Ni	58.68	Uranium.....	U	238.5
Niton (radium emanation)....	Nt	222.4	Vanadium.....	V	51.0
Nitrogen.....	N	14.01	Xenon.....	Xe	130.2
Osmium.....	Os	190.9	Ytterbium (Neoytterbium)...	Yb	172.0
Oxygen.....	O	16.00	Yttrium.....	Yt	89.0
Palladium.....	Pd	106.7	Zinc.....	Zn	65.37
Phosphorus.....	P	31.04	Zirconium.....	Zr	90.6

—J. Am. Chem. Soc., 1911, v. 33, p. 1642.

14. CHEMICAL FORMULAS.

Düsterbehn, F., notes that the Ph. Germ. V now presents a chemical formula, also the atomic and molecular weight for the several chemical products that are described.—Apoth.-Ztg. 1911, v. 26, p. 106. See also Pharm. J. 1911, v. 86, p. 496.

Beringer, George M., asserts that the Ph. Germ. V is the first of the German pharmacopœias in which chemical formulas are given. Empirical formulas are tabooed, and throughout structural formulas are used.—Am. J. Pharm. 1911, v. 83, p. 328. Also Proc. New Jersey Pharm. Assoc. 1911, p. 76.

8. NONPHARMACOPŒIAL STANDARDS.

1. NATIONAL FORMULARY.

Whitworth, F. C., in discussing the scope of the U. S. P. and of the National Formulary, expresses the belief that the latter book has admirably performed the function of standardizing nonofficial preparations and, in recent years, has been brought closer to the medical and pharmaceutical professions than ever before.—*Rocky Mountain Druggist*, 1911, v. 25, Jan., p. 26.

Diekman, George C., reports that the N. F. IV will appear in two parts: Part one will consist of formulas inclusive of those in the appendix to N. F. III, with the exception of such of the latter as may be deleted; part two will consist of standards and descriptions of drugs and simples, used in the preparations of the N. F., and for which the Pharmacopœia gives no standards. Many of the present formulas will be thoroughly revised, particularly those of the organic iron preparations.—*Proc. New York Pharm. Assoc.* 1911, p. 91.

Wilbert, M. I., states that the Committee of Revision of the National Formulary has worked hard and conscientiously and, if the final result is not satisfactory to the users of the book, it will be entirely the fault of the users, since they have been given every opportunity possible to criticize the work before its issuance.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 613.

Dunning, H. A. B., states that, while the National Formulary will likely contain some formulas deleted from the U. S. P., it should be borne in mind that the N. F. was intended to serve a purpose entirely different from that of the U. S. P.—*Ibid.* p. 613.

Eberle, Eugene G., states that the present revision of the National Formulary will evidence the elimination of many shortcomings. He believes that the Formulary should always remain the property of the American Pharmaceutical Association.—*Ibid.* p. 396.

The A. Ph. A. Committee on Drug Market reiterates the advisability of eliminating the National Formulary as a legal standard under the food and drugs act as, in its present condition, it is unsuited to such an important place as has been given to it.—*Drug Topics*, 1911, v. 26, p. 276.

Bradt, Warren L., reports that the New York State Board of Pharmacy adopted a rule that every pharmacy and drug store shall own and have on file at all times the eighth decennial revision of the Pharmacopœia and the latest edition of the National Formulary, and no registration certificate shall be issued a pharmacy or drug store till it complies with this rule.—*Proc. New York Pharm. Assoc.* 1911, p. 32.

Whitney, Mrs. D. V., presents the report of the committee on National Formulary and makes a number of suggestions for changes in formulas.—*Proc. Missouri Pharm. Assoc.* 1911, pp. 98-102.

In a report of the City of Washington Branch meeting for February, a number of modified formulas for N. F. preparations are reprinted.—*Drug. Circ.* 1911, v. 55, pp. 188–189.

Thum, John K., comments on several N. F. formulas.—*Am. Druggist*, 1911, v. 58, pp. 241–242.

Diehl, C. Lewis, presents a report of the Committee on National Formulary, including a list of the articles now in the book that have not been admitted to the new edition.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, pp. 485–490. See also *Am. Druggist*, 1911, v. 59, p. 110; *N. A. R. D. Notes*, 1911, v. 12, p. 1472; *Drug. Circ.* 1911, v. 55, pp. 502–503; *Meyer Bros. Drug.* 1911, v. 32, p. 336, and other drug journals.

List of articles to be dropped from the National Formulary.

Acidum hyophosphorosum.	Fluidextractum menyanthis.
Balsamum traumaticum.	Fluidextractum rhamni purshianæ alkalinum.
Bismuthi oxidum hydratum.	Fluidextractum urticæ.
Boroglycerinum.	Lac humanisatum.
Ceratum camphoræ compositum.	Linimentum iodi.
Decoctum aloes compositum.	Liquor ammonii acetatis concentratus.
Elixir acidi salicylici.	Liquor electropœicus.
Elixir ammonii valerianatis et quiniæ.	Liquor extracti glycyrrhizæ.
Elixir apii graveolentis compositum.	Liquor iodi causticus.
Elixir caffeinæ.	Liquor magnesi bromidi.
Elixir chloroformi compositum.	Liquor morphinæ citratis.
Elixir cinchonæ, pepaini et strychninæ.	Liquor morphinæ hypodermicus.
Elixir cocæ et guaranæ.	Liquor seriparus.
Elixir eucalypti.	Liquor sodii carbolatis.
Elixir euonymi.	Liquor sodii oleatis.
Elixir frangulæ.	Lotio adstringens.
Elixir glycyrrhizæ.	Mistura acaciæ.
Elixir grindeliæ.	Mistura splenetica.
Elixir malti et ferri.	Mucilago dextrini.
Elixir paraldehydi.	Mucilago salep.
Elixir picis compositum.	Oleatum zinci.
Elixir pilocarpi.	Pasta ichthyoli, Unna.
Elixir quiniæ et phosphatum compositum.	Pepsinum aromaticum.
Elixir rhei.	Pulvis acaciæ compositus.
Elixir rhei et magnesi acetatis.	Pulvis amygdalæ compositus.
Elixir stillingiæ compositum.	Pulvis anticatarrhalis.
Emplastrum picis liquidæ compositum.	Pulvis iodoformi compositus.
Irish moss emulsion of cod-liver oil.	Pulvis pro lacte humanisato.
Dextrin emulsion of cod-liver oil.	Spiritus aromaticus.
Emulsions of volatile oils.	Spiritus curassao.
Emulsum olei terebinthinæ fortior.	Spiritus ophthalmicus.
Extractum glycyrrhizæ depuratum.	Spiritus saponatus.
Ferri hypophosphis.	Spongia compressa.
Fluidextractum camelliæ.	Spongia decolorata.
Fluidextractum coffeæ viridis.	Syrupus ferri arsenatis.
Fluidextractum cornus circinatæ.	Syrupus morphinæ compositus.
Fluidextractum malti.	Syrupus morphinæ sulphatis.

Tinctura aconiti (Fleming).
 Tinctura antacrida.
 Tinctura tolutana solubilis.
 Tinctura vanillini composita.

Vinum aurantii.
 Vinum carnis, ferri et cinchonæ.
 Vinum cocæ aromaticum.
 Zinci oleo-stearas.

List of articles to be added to the National Formulary.

Aromatic castor oil.
 Elixir of almond, compound.
 Elixir of cardamom, compound.
 Elixir of formates.
 Elixir of formates, compound.
 Elixir of glycyrrhiza, aqueous.
 Elixir of glycerophosphates, compound.
 Elixir of sodium salicylate, compound.
 Elixir of three bromides.
 Elixir of vanillin, compound.
 Elixir, red.
 Extract of ergot (Bonjean).
 Extract of malt with cod liver oil
 Fluidextract of baptisia.
 Fluidextract of chionanthus.
 Fluidextract of cinchona, aqueous.
 Fluidextract of condurango.
 Fluidextract of cocilliana.
 Fluidextract of dioscorea.
 Fluidextract of drosera.
 Fluidextract of echinacea.
 Fluidextract of euphorbia pilulifera.
 Fluidextract of heloniae.
 Fluidextract of cataria.
 Fluidextract of senecio.
 Fluidextract of trifolium.
 Fluidglycerates (general formula).
 Fluidglycerate of glycyrrhiza.
 Fluidglycerate of krameria.
 Fluidglycerate of cascara.
 Fluidglycerate of cascara aromatic.
 Fluidglycerate of rhubarb.
 Honey and borax.
 Honey of rose with borax.
 Hypodermic injection of ergot.
 Inunction, menthol.
 Inunction, menthol, compound.
 Milk of bismuth.
 Paste, Laassar's stronger resorcinol.
 Petroxolin, liquid.
 Petroxolin, solid.
 Petroxolin, camphorated chloroform.
 Petroxolin, cade.
 Petroxolin, creosote.
 Petroxolin, eucalyptol.
 Petroxolin, guaiacol.
 Petroxolin, mercury.

Petroxolin, iodine.
 Petroxolin, iodine, diluted.
 Petroxolin, iodoform.
 Petroxolin, menthol.
 Petroxolin, methyl salicylate.
 Petroxolin, naphthol.
 Petroxolin, phenol.
 Petroxolin, tar.
 Petroxolin, salicylated.
 Petroxolin, camphorated phenol.
 Petroxolin, sulphur.
 Petroxolin, compound sulphur.
 Petroxolin, turpentine, Venice.
 Pills of digitalis, squill and mercury
 (Niemeyer's Pills, No. 1).
 Pills of opium, digitalis and quinine
 (Niemeyer's Pills, No. 2).
 Solution of aluminum acetate, crude
 (Burrow's Solution).
 Solution of the bromides of gold, arsenic
 and mercury.
 Solution of coal tar.
 Solution of hydrastine, compound.
 Solution of pepsin, antiseptic.
 Solution of sodium chloride physiological.
 Spirit of ammonia, anisated.
 Spirit of vanillin, compound.
 Spray, eucalyptol.
 Spray, menthol.
 Spray, menthol, compound.
 Spray, thymol.
 Syrup of ammonium hypophosphite.
 Syrup of blackberry.
 Syrup of figs and senna, compound.
 Syrup of iodo-tannin.
 Syrup of quinine with chocolate.
 Sterilization (general article).
 Tincture of cactus grandiflorus.
 Tincture of caramel.
 Tincture of crocus indicus.
 Tincture of ergot, ammoniated.
 Tincture of larkspur.
 Tincture of opium with saffron.
 Tincture of passion flowers.
 Tincture of pulsatilla.
 Tincture of saw palmetto and santal.
 Water, phenolated.

Those articles used in the formulas of the N. F., but not standardized by the Pharmacopœia, will be defined and included in Part II of the new book.

List of articles, at present in the Appendix, which have been retained and will be included in the body of the National Formulary.

Antimonium sulphuratum.
 Charta potassii nitratis.
 Decoctum sarsaparillæ compositum.
 Emplastrum picis burgundicæ.
 Emplastrum picis cantharidatum.
 Emplastrum resinæ.
 Extractum aconiti.
 Extractum cinchonæ.
 Extractum jalapæ.
 Extractum podophylli.
 Fluidextractum asclepiadis.
 Fluidextractum aspidospermatis.
 Fluidextractum castanæ.
 Fluidextractum colchici radices.
 Fluidextractum dulcamaræ.
 Fluidextractum gossypii radices.
 Fluidextractum rumicis.
 Fluidextractum scoparii.
 Glyceritum vitelli.
 Hydrargyri subulphas flavus.
 Infusum brayeræ.
 Infusum cinchonæ.
 Linimentum sinapis compositum.
 Liquor ferri acetatis.
 Liquor ferri citratis.
 Liquor ferri nitratis.
 Liquor gutta-perchæ.

Magnesiæ citras effervescentes.
 Massa copaibæ.
 Mistura magnesiæ et asafœtidæ.
 Oleum phosphoratum.
 Pepsinum saccharatum.
 Pilulæ aloes et asafœtidæ.
 Pilulæ antimonii compositæ.
 Pilulæ rhei.
 Potassa cum calce.
 Potassa sulphurata.
 Pulvis antimonialis.
 Spiritus myrciæ.
 Spiritus odoratus.
 Syrupus allii.
 Syrupus althææ.
 Tinctura bryoniæ.
 Tinctura croci.
 Tinctura cubebæ.
 Tinctura humuli.
 Tinctura ignatiæ.
 Tinctura rhei dulcis.
 Tinctura sumbul.
 Trochisci menthæ piperitæ.
 Unguentum plumbi iodidi.
 Unguentum sulphuris alkalinum.
 Vinum colchici radices.

—Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 485–490.

An editorial (Meyer Bros. Drug. 1911, v. 32, p. 323) states that the fourth edition of the National Formulary is now under revision and about to be published. The committee in charge of the work has decided upon what should go into the standard, but the decision is based on their own judgment. The committee is broad minded and is anxious to make the fourth edition as near perfect as possible. With this in view the committee is submitting to the pharmacists of this country a number of formulas which are to be incorporated in the new edition, unless serious objections are made to them.

Some of the new formulas that have been suggested for inclusion in the forthcoming edition of the National Formulary are reprinted.—Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 602 ff. Also Drug. Circ. 1911, v. 55, p. 651 ff.; Am. Druggist, 1911, v. 59, pp. 263 ff.; N. A. R. D. Notes, 1911–12, v. 13, pp. 681 ff.; and other drug journals.

Wilbert, M. I., points out that the Committee on National Formulary is calling renewed attention to some of the formulas that it is proposed to add to the forthcoming edition of that book. While all of the formulas have been published previously, their systematic publication with the direct invitation for comment and criticism before final publication is being favorably commented on by editors of pharmaceutical journals, and the resulting publicity should contribute materially to make the N. F. IV more nearly free from glaring errors of omission or commission than any of its predecessors.—*Am. J. Pharm.* 1911, v. 83, p. 566.

Beringer, Geo. M., reports that the committee on standards for unofficial drugs and chemical products is engaged in formulating standards for a number of articles not now recognized by the U. S. P. Many of these will no doubt be admitted into the N. F., whereupon they will become the legal standards of the country. A list of the titles under consideration is submitted.—*Pharm. Era*, 1911, v. 44, p. 4. See also *Am. J. Pharm.* 1911, v. 83, pp. 85-86; *Am. Druggist*, 1911, v. 58, p. 15; *Bull. Am. Pharm. Assoc.* 1911, v. 6, pp. 591-594.

An editorial (*Chem. & Drug*, 1911, v. 79, p. 612) repeats its statement that no greater disaster could happen to the drug trade than to be legally bound to standards set forth in private publications, however useful they may be as books of reference, citing as an illustration a recent prosecution for the sale of emulsion of magnesia which did not comply with the requirements.

2. RECEIPT BOOK.

An editorial (*Am. Druggist*, 1911, v. 59, p. 138) discusses the proposed A. Ph. A. recipe book, and points out that such a book would be a fit place for the formulas of the preparations dismissed from the United States Pharmacopœia and National Formulary.

Fennel, Charles T. P., in discussing unofficial formulæ deprecates the proposition to publish a receipt book, and expresses the belief that the American Pharmaceutical Association could serve the best interest of American pharmacy by exploiting U. S. P. and N. F. products.—*Proc. Ohio Pharm. Assoc.* 1911, pp. 121-125.

Eberle, Eugene G., thinks that publishing a "recipe book" is entirely practical and advantageous.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 396.

Raubenheimer, Otto, comments on the preparations dismissed from the United States Pharmacopœia and the National Formulary, and expresses the opinion that we should have a safe place in the form of a recipe book in order to preserve the formulas which otherwise might not be readily obtainable.—*Am. Druggist*, 1911, v. 59, p. 308.

The American Correspondent (Chem. & Drug. 1911, v. 79, p. 342) states that since the N. F. became a legal standard under the food and drugs act it has been felt that a number of the pharmaceutical monstrosities in it ought to be thrown out, and the purpose of the general recipe book would be to publish such material as well as to give space to a big collection of other miscellaneous formulas of interest to the trade. The proposition is not viewed with favor all around, although a special committee of the Council of the A. Ph. A. has approved of it.

An editorial note (Pharm. J. 1911, v. 87, p. 293) states that it has been feared by a good many people that many of the formulæ in the National Formulary, for instance, were unscientific and undesirable in character, and those who originally brought forward the idea of a general recipe book thought this would provide an opportunity of removing such things from the National Formulary, and therefore from official and legal sanction.

3. NEW AND NONOFFICIAL REMEDIES.

Heubner calls attention to the work of the Council on Pharmacy and Chemistry of the American Medical Association, and points out that work of a similar nature is sadly needed in Germany, where the dictum "laissez faire" has been adhered to altogether too long.—Therap. Monatsh. 1911, v. 25, p. 208.

An unsigned article (Am. J. Clin. Med. 1911, v. 18, pp. 254–255) calls attention to a paper by John H. Long in Science for December on the work of the Council of Pharmacy and Chemistry, and states that altogether, although we feel disposed to criticize the Council in some of the work it has done, and more so in the manner in which that work has been conducted in some respects, taken as a whole, it has been of immense importance to the medical profession and to the community. These men have cleared the ground of much encumbering débris and have even laid the foundation for important constructive work.

An editorial (Nat. Druggist, 1911, v. 41, p. 3) calls attention to a condensed dispensatory of new and nonofficial remedies.

Schuster, Karl, discusses the testing of a number of nonofficial preparations.—Ztschr. allg. österr. Apoth.-Ver. 1911, v. 49, pp. 285–286, 295, 303–304, 313–314, 321–322, 329, 337.

SYNTHETICS.

A book review of the Ph. Germ. V (Lancet, 1911, v. 180, p. 119) notes that considerable surprise has been caused by the method adopted with regard to the inclusion of the newer synthetic remedies, of which 20 have been included, and adds that the authorities have not hesitated to dictate, to the manufacturers of protected products

included in the pharmacopœia, the degree of purity that the latter must possess, a step that is bound to call forth considerable comment.

Beringer, George M., in discussing the admissions to the Ph. Germ. V, states that in the selection of pharmacopœial titles the Germans are not handicapped by product patents and trade-mark laws, and if the chemical name is too lengthy, or not suitable for an official title, they simply take the common or trade name.—*Am. J. Pharm.* 1911, v. 83, p. 331.

Raubenheimer, Otto, points out that a number of chemical substances have been introduced into the Ph. Germ. V under their trade-marked names. The saving feature of this fact is that the manufacturers of such products must comply with the standards established by the book.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 217.

Solis-Cohen, Solomon, in discussing the scope of the Pharmacopœia, states that, in the case of process patents and product patents, the effort should be made to use pharmacopœial control and standardization to the mitigation of the evils of high price and uncertainty of product possible under the present bad system.—*Critic and Guide*, 1911, v. 14, p. 31.

Kahn, Joseph, presents a review of organic synthesis and the chemical relationship of a number of widely used compounds.—*Merck's Rep.* 1911, v. 20, pp. 222-224.

Fränkel, Sigmund, reviews the progress in the theory and the practice of the production of synthetic remedies.—*Oesterr. Chem.-Ztg.* 1911, v. 14, pp. 124-126. See also *Pharm. Post*, 1911, v. 44, pp. 555-557.

Montagne, P. J., reports some observations on the relation between the chemical structure and physiological action of organic combinations.—*Pharm. Weekblad*, 1911, v. 48, pp. 856-874.

Feri, K., reports an experimental study on the action of antipyretics.—*Arch. internat. pharmacod. et therap.* 1911, v. 21, pp. 27-46.

Kobert, Karl, reports pharmacological experiments with several 2, 5-pyridines.—*Ztschr. exper. Path. u. Therap.* 1911, v. 9, pp. 614-638.

NEW REMEDIES.

Goldmann, Felix, presents a review of some of the more important new remedies of the year 1910, and points out that the number of evidently new articles introduced during the year is much smaller than in previous years.—*Ber. pharm. Gesellsch.* 1911, v. 21, pp. 33-54.

Keenan, Thomas J., presents the report of the committee on new remedies.—*Proc. New York Pharm. Assoc.* 1911, pp. 119-123; 225-247. Also *Am. Druggist*, 1911, v. 59, pp. 175, 210-212, 268, 311.

Beringer, George M., discusses the admission of new remedies to the Ph. Germ. V and comments on the recognition of the commercial

name as a synonym for the pharmacopœial title.—Proc. New Jersey Pharm. Assoc. 1911, p. 79.

Decker, Hermann, discusses the production of some of the alkaloids and newer remedies.—Pharm. Post, 1911, v. 44, pp. 823–825.

Gössling, W., presents a review of the new remedies introduced during 1910.—Pharm. Post, 1911, v. 44, pp. 153–154, 161–162.

Rabow, S., reviews the therapeutic innovations, including specialties and secret remedies, during the year 1910.—Chem. Ztg. 1911, v. 35, pp. 162 ff.

Riedel's Mentor (1911, pp. 133–139) presents a compilation of the names, composition, properties and uses of the new remedies, specialties, and technical products marketed during the previous year.

A series of unsigned articles, entitled: "The Modern Materia Medica," presents the names, with their descriptions, of new or little known remedies.—Drug. Circ. 1911, v. 55, p. 78.

Fleissig presents, in the form of a table, a number of new remedies with reference to their uses, production, and the literature relating to them.—Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, pp. 113–116, 346–351.

Fussell, M. H., in a paper on the dangers of certain ethical proprietaries to both physicians and public, calls renewed attention to the fallacy of using ready-made mixtures, be they proprietary or official.—J. Am. M. Assoc. 1911, v. 57, pp. 1194–1198. Also Tr. Am. M. Assoc. Sec. Pharm. & Therap. 1911, pp. 285–294.

Heubner, W., discusses the modern methods of producing medications, and ventures the opinion that a specialty is like a ready-made suit of clothes, while a prescription is made to measure.—Therap. Monatsh. 1911, v. 25, pp. 402–404.

Spiegel, L., discusses some false statements regarding the qualitative and quantitative composition of some of the newer remedies.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 13–27.

A list of proprietary preparations, the sale of which it is recommended should be prohibited in the Canton of Zürich, is reprinted.—Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, pp. 141 ff.

Ladd, E. F., expresses the opinion that one of the greatest evils of our time is the number and kind of patent medicines or quack nostrums constantly being brought before the public and made popular through advertising.—North Dakota Pharm. Assoc. 1911, pp. 61–62.

An editorial (Brit. Food J. 1911, v. 13, pp. 105–106) states that the United States still remains the country in which the patent and proprietary business is most flourishing.

Puckner, W. A., discusses the methods of exploiting proprietary medicines in the United States.—Rep. Chem. Lab. Am. M. Assoc. 1911, v. 4, pp. 7–11.

The British Medical Journal (1911, v. 2, pp. 32-37, 77-79, 451, 456, 767, 853, 1543) continues its reports on the composition of certain secret remedies. See also editorials, pp. 41, 90, 304, 1563.

Hübner, Otto, discusses the so-called substitute preparations, and deprecates the widespread practice of introducing unsatisfactory and impure substitutes for advertised proprietaries.—Pharm. Post, 1911, v. 44, pp. 630-631.

PATENTS AND TRADE-MARKS.

Puckner, W. A., presents a report of the committee on patents and trade-marks of the Council on Pharmacy and Chemistry of the A. M. A.—Rep. Council Pharm. & Chem. 1911, pp. 49-52. Also J. Am. M. Assoc. 1911, v. 57, p. 1780.

Stewart, F. E., presents a report for the committee on patents and trade-marks.—Proc. Pennsylvania Pharm. Assoc. 1911, pp. 81-86.

Wilbert, M. I., discusses the relation of pharmacists to present-day abuses under our patent laws.—*Ibid.* pp. 86-90.

A discussion on the subject of patents and the report of the committee on patents are reproduced.—Tr. Am. Inst. Chem. Eng. 1911, v. 4, 1912, pp. 417-505.

A resolution on trade-marks and patents adopted by the Section on Pharmacology and Therapeutics requests that amendments to the patent and trade-mark laws be sought whereby no patents shall be granted on materia medica products, and that patents be limited to process and apparatus for manufacture.—Tr. Am. M. Assoc. Sec. Pharm. & Therap. 1911, p. 11.

Stewart, Frank E., presents an abstract of his discussion on patents, trade-marks, and pharmacy.—Pharm. Era, 1911, v. 44, p. 546.

An editorial note (Pharm. J. 1911, v. 87, p. 402) calls attention to the discussion of medicinal compounds from a patentable standpoint, in the United States in the Scientific American, and the change in the decisions rendered in recent years.

Duliere, Walter, discusses patented chemical medicaments, their introduction into the pharmacopœias and their adulteration.—Bull. Soc. Roy. Pharm. 1911, v. 55, pp. 193-195. See also Mazloun, V. *Ibid.* pp. 217-220.

An editorial (Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 55-56) discusses product patents, and the contrast between the patent laws of Germany and the United States.

Linke, H., regrets that the Ph. Germ. V did not include in the introduction to that Pharmacopœia a short abstract of the German trade-mark law.—Ber. pharm. Gesellsch. 1911, v. 21, p. 172.

An editorial (Pharm. Ztg. 1911, v. 56, pp. 571-572, 581-582) in discussing proprietary rights in trade-marked names for medicines in Germany, points out that it would be desirable to grant proprietary

rights only in a qualifying term appended to the name, and that the name itself should be and remain public property.

Besett, George M., presents the report of the committee on trade-marks. He also calls attention to observations that are being made on the psychology of trade-marks.—*Proc. N. W. D. A.* 1911, pp. 210-223.

Kloeppe, E., discusses the practicability of a patent universally recognized.—*Chem. Ztg.* 1911, v. 35, p. 656. Also *Ztschr. ang. Chem.* 1911, v. 24, pp. 1201-1203.

4. ANALYTICAL DATA.

Kahn, Joseph, reports the recommendation that volumetric processes be classified into groups and the details of the operations be only considered in the appendix of the *Pharmacopœia* and simply referred to in connection with the individual monographs.—*Proc. New York Pharm. Assoc.* 1911, p. 84.

Coblentz, Virgil, thinks that the moisture content of chemicals should be definitely stated, so as to leave no doubt as to what the material, other than the active principle, consists of.—*Meyer Bros. Drug.* 1911, v. 32, p. 363.

The committee on quantitative methods of analysis of the Division of Pharmaceutical Chemistry of the American Chemical Society presents an abstract of its report on methods for the determination of mercurous salts and mercuric salts.—*Am. J. Pharm.* 1911, v. 83, pp. 186-192.

Düsterbehn, F., points out that the number of articles included in the *Ph. Germ. V* for which assay processes are included has been materially enlarged upon.—*Apoth.-Ztg.* 1911, v. 26, p. 106.

See also *Pharm. J.* 1911, v. 86, pp. 93, 496; and *Chem. & Drug.* 1911, v. 78, p. 13.

The conference meeting of the executive committee is reported to have adopted a resolution agreeing that the methods used for testing standards by the Association of Official Agricultural Chemists be used as far as possible for the U. S. P.—*Pharm. Era*, 1911, v. 44, p. 4.

Plohn, Robert, presents a review of the progress made in pharmaceutical chemistry, more particularly in the field of analytical chemistry.—*Pharm. Post*, 1911, v. 44, pp. 1 ff.

Ruddiman, E. A., presents an abstract of his paper on pharmacopœial tests that can be made in a test tube.—*Pract. Drug.* 1911, v. 29, May, p. 41.

Garnett, Henry, gives a concise summary of a number of microchemical reactions.—*Pharm. J.* 1911, v. 86, p. 375.

Mindes, J., enumerates a number of characteristic reactions for some of the newer remedies.—*Pharm. Post*, 1911, v. 44, pp. 680-681.

Serger, H., reviews the chemistry of preservatives.—*Chem. Ztg.* 1911, v. 35, pp. 1127–1129, 1150–1152, 1166–1169, 1194–1195.

Skinner, H. J., presents the report of the committee on standard specifications, including a report on alum, caustic soda, hydrochloric acid, soda ash, sulphuric acid, and oil of turpentine.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 860–863.

Krulla, Rudolf, discusses the quantitative relations of the separation of a body between two phases.—*Ztschr. physik. Chem.* 1911, v. 76, pp. 497–508.

Dimroth, Otto, reports some additional observations on the influence of the solvent on the rapidity of reaction, and on valency.—*Ann. Chem.* 1910, v. 377, pp. 127–163.

Schmidt, G. C., reports a study on the adsorption of solutions, and calls attention to historical notices on the phenomena of adsorption by Berthold (*Ztschr. Physik. Chem.* 1907, v. 60, p. 257).—*Ztschr. Physik. Chem.* 1910, v. 74, pp. 689–737.

Homfray, Ida Frances, in a report of observations on the adsorption of gases by wood charcoal, points out that the phenomena of adsorption were observed by Scheele and Fontana independently in 1777.—*Ibid.* v. 74, pp. 129–201.

Marc, R., comments on the paper by Schmidt.—*Ibid.* 1911, v. 76, pp. 58–74.

A book review (*Ber. pharm. Gesellsch.* 1911, v. 21, p. 457) calls attention to a volume by Lehmann on "The New World of Fluid Crystals and their Import for Physics, Chemistry, Technology, and Biology."

Gillette, C. E., contributes a note on the effect of continued grinding on water of crystallization.—*Chem. News*, 1911, v. 104, p. 313.

Lilly, J. K., calls attention to the difficulty experienced by analysts in securing samples for assay. Lack of uniformity in results of different chemists of the same lot of drugs is often explained by the different methods employed in withdrawing samples.—*Proc. N. W. D. A.* 1911, p. 159.

Vanderkleed, Chas. E., endorses the suggestion that wholesalers give retailers as much information as possible concerning the content of a package, particularly with regard to physical constants and tests in comparison with the U. S. P. requirements.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 132.

Merck, E. A., reviews a book by Julius Aeby on dangerous wares, and asserts that the statements made regarding the dangerous nature of many of the heavier chemicals are not warranted.—*Chem. Ind.* 1911, v. 34, pp. 146–148. Aeby replies, pp. 238–240. Followed by Merck, pp. 240–241.

Beringer, George M., in a discussion of the Ph. Germ. V, expresses the opinion that the introduction of formulas and processes for the

manufacture of such chemicals as the nitrate, subgallate, subnitrate, and subsalicylate of bismuth, calcium phosphate, iron and quinine citrate, quinine tannate, etc., seems strange to us in the light of present day experience and economic conditions.—Proc. New Jersey Pharm. Assoc. 1911, p. 77.

An unsigned review (Pharm. J. 1911, v. 86, p. 496) of the Ph. Germ. V., commends the indication of the purpose and signification of each of the tests ordered, as well as the percentage of any constituent which is intended to be shown by a quantitative test.

1. ADULTERATIONS.

Allen, R. M., points out that there are two classes of adulteration: First, adulteration due to wilful intent or gross carelessness; second, adulteration due to various trade and professional problems.—Am. J. Pharm. 1911, v. 83, p. 403.

Caspari, Charles, jr., notes that the subject of adulteration of foods is by no means a new one and dates back 500 to 1,000 years.—Proc. Maryland Pharm. Assoc. 1911, p. 73.

Desha, L. J., in discussing the rather serious condition of affairs existing in the drug business at the present time, states that it is only necessary to refer to the bulletins of the food and drugs departments of the several States. The analytical showing speaks for itself. The large numbers of illegal cases must be a source of concern to all who are thoughtful.—Proc. Tennessee Pharm. Assoc. 1911, p. 25.

The Board of Pure Food and Drug Commissioners (2nd Ann. Rep. Providence, R. I., 1911, p. 7) finds a lamentable amount of inexcusable negligence among the druggists of the State, and this quite as frequently among those who consider themselves first-class druggists as among those who make no such pretensions.

Lilly, J. K., expresses the belief that the combined efforts of producers, manufacturers, wholesale and retail druggists, Federal, State, and local authorities to prevent the adulteration of drugs is being crowned with increasing success; this to such an extent that it may now truly be said that deliberate and criminal adulteration of drugs has become so rare as to be almost a thing of the past.—Proc. N. W. D. A. 1911, p. 157.

Seel, Eugen, comments on the necessity for the systematic examination of pharmaceutical preparations in the chemical laboratory.—Ztschr. ang. Chem. 1911, v. 24, pp. 1997–2006, 2054–2059.

Army, H. V., presents the report of the committee on adulterations and sophistications of the Ohio State Pharmaceutical Association, and concludes that the report evidences a marked improvement in quality over samples examined in previous years.—Proc. Ohio Pharm. Assoc. 1911, pp. 125–127.

Whitney, D. V., in the report of the committee on drug adulterations, expresses the belief that the only safe and reliable policy for the retail druggist to pursue in buying is to purchase in original packages put up by reliable manufacturers.—*Proc. Missouri Pharm. Assoc.* 1911, p. 95.

Amos, W. S., states that his experience would show that a drug sold with a guarantee was not necessarily of higher quality than drugs sold without a guarantee.—*Ibid.* p. 97.

Cook, Alfred N., states that pharmacists should arrange to assay any questionable stock. The public is entitled to accurately prepared drugs.—*Bull. South Dakota Food & Drug. Dept.* 1911, No. 23, p. 2.

Havenhill, L. D., reports that during the year from May, 1910, to April, 1911, inclusive, nearly 700 preparations have been received at the laboratory, and that the present status of these preparations is encouraging.—*Proc. Kansas Pharm. Assoc.* 1911, p. 109.

An editorial (*Am. Druggist*, 1911, v. 59, p. 216) calls attention to several reports on inaccurately made pharmaceutical preparations, and points out that C. S. Porter, Kentucky, in an examination of 327 preparations found 88 not of U. S. P. standard. A report from Connecticut states that of the 138 samples examined, 78 were not of U. S. P. standard.

Bachman, Gustav, reports the analyses of a number of pharmacopœial articles and states that with a few exceptions the samples were of good quality; some assayed even higher than the requirements of the U. S. P.—*Proc. Minnesota Pharm. Assoc.* 1911, pp. 100–102.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 33) report that their experience evidences the need for constant watchfulness to preserve the high standard of purity. Arsenic and lead as impurities continue to claim a large share of their attention.

Puckner and Warren, in reporting their examination of calcium phenolsulphonate, point out that the results of the examination of this substance further illustrate what other examinations in the chemical laboratory of the American Medical Association have so often shown and that is that commercial products which are but little used and for which there are no authoritative standards for strength and purity are also invariably unreliable in composition.—*J. Am. M. Assoc.* 1911, v. 57, p. 1384.

See also the reports of the committees on adulterations in the proceedings of the several State pharmaceutical associations.

2. REAGENTS.

Hunt, Reid, reports that the Tenth International Congress of Pharmacy, held at Brussels, September 1–6, 1910, adopted a resolution pointing out that the international unification of reagents would

aid in securing uniform analytical results, and would be of value in the interpretation of the different pharmacopœias.—*Am. J. Pharm.* 1911, v. 83, p. 25.

White, Edmund, in an appendix to his articles on analytical reagents, standards and tests, discusses the preparation of solutions to be used in the tests and enumerates the several reagents to be used.—*Pharm. J.* 1911, v. 86, 584–585.

Düsterbehn, F., in a review of the *Ph. Germ. V*, calls attention to the reagents and tests, as well as the changes in composition and nomenclature included in the new Pharmacopœia.—*Apoth.-Ztg.* 1911, v. 26, pp. 244–245, 252–253.

von Waldheim, Max, in a supplement to *Pharmazeutische Praxis* (1911, v. 10), presents a review of the more important reagents and reactions for chemistry, pharmacy, and physiology, arranged according to the authors.

The regulations of the Imperial Minister of the Interior in regard to the arrangement of the laboratory of the apothecary and the nature of the reagents to be kept on hand are reprinted.—*Österr. Sanitätswesen*, 1911, v. 23, pp. 262–269.

Wiley, H. W., reports that, during the last year, 427 chemical reagents have been examined. The quality of chemicals supplied during the year does not compare favorably with those supplied during 1910.—*Ann. Rep. U. S. Dept. Agric.* 1911–12, p. 437.

Baker, J. T., discusses some of the problems involved in the manufacture of chemically pure acids.—*Tr. Am. Inst. Chem. Eng.* 1911, v. 4, 1912, pp. 331–346.

Schütz, E., discusses the production of chemically pure acids.—*Ztschr. ang. Chem.* 1911, v. 24, pp. 487–491.

Enklaar, J. E., comments on the dissociation constants of oxalic acid.—*Chem. Weekblad*, 1911, v. 8, p. 443.

Stevens, A. B., states that, in reply to an inquiry, the following substances were given, by different chemists, as preferable for use as the standard for the preparation of volumetric solutions: Potassium bitartrate, sodium carbonate, sulphuric acid standardized gravimetrically as barium sulphate, hydrochloric acid standardized gravimetrically as silver chloride, hydrochloric acid standardized volumetrically against silver nitrate, oxalic acid, succinic acid, and morphine for alkaloidal determinations.—*Pacific Pharm.* 1911, v. 5, p. 86.

Elvove, Elias, presents a note on the use of sulphur dioxide in checking the equivalencies of the volumetric solutions of iodine, alkali, and silver.—*Am. J. Pharm.* 1911, v. 83, pp. 19–23.

Stevens and Schlichting discuss the standardization of solutions for alkaloidal assay.—*Am. Druggist*, 1911, v. 59, pp. 259–260.

3. INDICATORS.

Stevens, A. B., states that it is a well-known fact that different results are obtained by the use of different indicators, with the same standard solution. It is therefore important that, whenever possible, the standard should be prepared by using the same indicator as is used in practice.—*Pacific Pharm.* 1911, v. 5, p. 87.

A book review (*Ber. pharm. Gesellsch.* 1911, v. 21, p. 590) calls attention to a volume on the present status of indicators by A. Thiel.

Carlson, C. E., presents a communication on the preparation of litmus solutions and paper.—*Svensk. farm. Tidskr.* 1911, v. 15, pp. 61–64.

Howard and Pope discuss indicators of the methyl red type, review the use of methyl red as an indicator, and discuss the chemistry of some of the related compounds.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 1333–1336.

Rossi, Giuseppe, discusses the catalytic action of light in the oxidation of phenolphthalin to phenolphthalein.—*Boll. chim. farm.* 1911, v. 50, pp. 948–950.

Kylin, Harald, discusses the red and blue coloring matters of algæ.—*Ztschr. physiol. Chem.* 1911–12, v. 76, pp. 396–425.

Caesar & Loretz (*Jahres-Bericht*, 1911, p. 9) endorse the recommendation, made by Rupp, to use methyl red as an indicator in the titration of alkaloids.

Jackson and Clarke present the final account of their work on curcumin, the yellow coloring matter of curcuma or turmeric.—*Am. Chem. J.* 1911, v. 45, pp. 48–58.

Jaffa, M. E., reports a sample of powdered turmeric containing cereal flour, and calcium sulphate.—*Bull. California Bd. Health*, 1911, v. 7, p. 163.

Donnan and Harris report observations on the osmotic pressure and conductivity of aqueous solutions of congo red and reversible membrane equilibria.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. —.

Guerbet presents a study of the reaction of neutral red from the chemical standpoint.—*Compt. rend. Soc. Biol.* 1911, v. 70, p. 514. See also *J. Pharm. et. Chim.* 1911, v. 4, p. 135.

4. PHYSICAL CONSTANTS.

Brown, Linwood A., thinks the druggist should be familiar with the determination of the physical constants, such as specific gravity, boiling point, melting point, refractive index, optical rotation, etc.—*Proc. Kentucky Pharm. Assoc.* 1911, p. 96.

Schimmel & Co. (*Semi-Annual Report*, April, 1911, p. 126) note that to avoid repetition a special chapter has been set aside in the introduction to the *Ph. Germ. V* describing the various methods of

examination referred to in the work, such as for instance the determination of the melting point, the boiling point, the saponification value, etc.

Beringer, George M., thinks that a very commendable feature of the Ph. Germ. V is the introductory chapter, devoted to official methods to be followed in the making of such determinations as melting point, congealing point, boiling point, ash content, acid number, saponification value, ester value, iodine absorption, etc.—Proc. New Jersey Pharm. Assoc. 1911, p. 77; also Am. J. Pharm. 1911, v. 83, p. 329.

Stevens, A. B., thinks that the methods for determining the physical constants should be thoroughly investigated. When the method of manipulation has been decided, the details of procedure should be so clearly stated that the operation may be carried out without variation by different chemists.—Pacific Pharm. 1911, v. 5, p. 85.

Rusby, H. H., is of the opinion that changes should not be made in the physical standards of the Pharmacopœia until positive proof of their desirability shall have been supplied. Many of the pharmacopœial requirements have been found burdensome by the commercial and manufacturing interests, and they have clamored and will clamor for their abolition or annulment.—Pharm. Era, 1911, v. 44, p. 141.

An editorial (Drug. Circ. 1911, v. 55, p. 164) states that in their work on the determination of certain physical constants of the materials with which they are dealing, the members of the Revision Committee are beginning to feel somewhat handicapped by the lack of certain uniform data as to boiling and melting points. These data are to be supplied by the United States Government, whose chemists and physicists have not yet entirely worked them out.

Vanderkleed, Chas. E., endorses the suggestion that wholesalers give retailers as much information as possible concerning the content of a package, particularly with regard to physical constants and tests in comparison with the U. S. P. requirements.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

SPECIFIC GRAVITY.

Heyl, Georg, discusses the Ph. Germ. V requirements for specific gravity, presents the requirements in the form of a table, and points out that unless otherwise directed the specific gravity of official articles is to be determined at 15°.—Apoth.-Ztg. 1911, v. 26, pp. 453-454.

Linke, H., regrets that the Ph. Germ. V has retained 15° as the temperature at which the specific gravity of official preparations is to be determined. He thinks this temperature is usually from 2° to 3°

lower than room temperature, and the Pharmacopœia might readily have increased the average temperature to 17°.—*Ber. pharm. Gesellsch.* 1911, v. 21, p. 178.

Freund, E., presents a table showing the changes in the specific gravity of the more important Ph. Germ. V liquids, between the temperatures of +11° and +30°.—*Apoth.-Ztg.* 1911, v. 26, p. 267.

Beringer, George M., notes that the specific gravity, unless otherwise stated for special reasons, is taken at 15° C. compared with distilled water at 15°. The U. S. P. VIII has not been followed by a single pharmacopœia nor by the U. S. Government departments in the adoption of 25°.—*Am. J. Pharm.* 1911, v. 83, p. 329. Also *Proc. New Jersey Pharm. Assoc.* 1911, p. 77.

Raubenheimer, Otto, thinks that the temperature for determining specific gravities should be 15°, as in the foreign pharmacopœias.

Coblentz, Virgil, concurs on this point, arguing that this temperature is more convenient than 25°, the latter always requiring correction or comparison. The use of 20° by the Government he does not approve.—*Pharm. Era*, 1911, v. 44, p. 12.

von Oefele asserts that neither 25° nor 15° is the correct temperature for the determination of specific gravity. It should be done at 4°, which is easily attained by refrigeration.—*Ibid.* p. 259.

Thompson, G. W., calls attention to the importance of a standard temperature for specific gravity determinations and for standardizing measures of capacity.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 256–257.

An unsigned article (*Pharm. Ztg.* 1911, v. 56, p. 193) describes and illustrates several forms of analytical balances that will comply with the Ph. Germ. V requirements for determining the specific gravity of official preparations.

Savory, C. B. (*Eng. Pat.* 19,564, Aug. 20, 1910) describes a portable and easily packed apparatus for ascertaining the specific gravity of fluids and liquids.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 451. Also *Lancet*, 1911, v. 180, p. 517.

Collard, E., jr., describes and illustrates a modified specific gravity bottle.—*Bull. pharm. Sud-Est*, 1911, v. 16, p. 241.

Bosart, L. W., describes and illustrates an improved picnometer for glycerin.—*J. Ind. & Eng. Chem.* 1911, v. 3, p. 508. See also *Merck's Rep.* 1911, v. 20, p. 232.

SOLUBILITIES.

Coblentz, Virgil, is reported as stating that the present official solubility figures were obtained from manufacturers, their determination being too much for the Committee in the time at its command.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 29.

An unsigned review of the Ph. Germ. V (*Pharm. J.* 1911, v. 86, p. 496) notes that the quantitative figures for solubilities show

evidence of much revision. Solubilities in water at 15° are usually given, instead of in "cold water," as previously.

Stevens, A. B., states that the method of determining solubilities should be clearly stated in the Pharmacopœia, otherwise very different results may be obtained.—*Pacific Pharm.* 1911, v. 5, p. 86.

Coblentz, Virgil, states that the solubility of salts is one of the weak points of the U. S. P., but is now being taken care of by the Government.—*Pharm. Era*, 1911, v. 44, p. 12.

An unsigned critique (*Pharm. J.* 1911, v. 87, p. 430) of the Report of the Committee of Reference in Pharmacy to the General Medical Council, notes that as to the question of solubilities, it is not easy to discover the principle guiding the selection.

Walker, J., discusses the theories of solutions.—*Chem. News*, 1911, v. 104, pp. 104–108. Also *Pharm. J.* 1911, v. 87, p. 356.

Armstrong, Henry E., presents his studies of the processes operative in solutions.—*Chem. News*, 1911, v. 103, pp. 97–99, 109–111. See also Armstrong and Crothers, p. 121; Armstrong and Wheeler, p. 133; and Armstrong and Worley, p. 145.

Schükarew, A., reports observations on the properties of solutions at their critical solution temperature.—*Ztschr. physik. Chem.* 1910, v. 71, pp. 90–108.

Baker and Adlam discuss the constancy of water of crystallization in hydrated salts, and conclude that it is possible to determine the true weight of the salt containing water of crystallization with the same degree of accuracy as that which is usually attained when weighing other substances.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 507–517.

Richards, Theodore W., discusses the possible solid solution of water in crystals, and points out that not only inclusion but also solid solution of solvent in crystals is to be feared in precise quantitative work.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 888–893.

Le Blanc and Schmandt report observations on crystallization and resolution in aqueous solution.—*Ztschr. physik. Chem.* 1911, v. 77, pp. 614–640.

Sackur, O., reports cryoscopic observations on the behavior of melted salts. The same author also reports on the solubility determinations for melted salts as solvents.—*Ztschr. physik. Chem.* 1911–1912, v. 78, pp. 550–572.

Noyes and Bray present some observations on the effect of salts on the solubility of other salts.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 1643–1663. See also article by Bray and Winninghoff, pp. 1663–1673, and by Bray, pp. 1673–1686.

Herz, W., in a contribution to the study of solubilities, reports observations on the influence of racemic and of tartaric acids on the solubility of boric acid.—*Ztschr. anorg. Chem.* 1911, v. 70, pp. 70–72.

Dawson, Harry Medforth, discusses the activity of acids and catalysts in relation to the nature of the solvent medium.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 1-10.

de Kolossovsky, Nicolas, in a contribution on the study of solutions, discusses the influence of dissolved salts on the substances to be dissolved.—*Bull. Soc. chim. Belg.* 1911, v. 25, pp. 183-210.

Harkins, William D., reports observations on the solubility of univalent salts in solutions of salts of different types.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 1807-1873.

Tyrer, Dan, in a contribution on the volume of a solute in solution, discusses the influence of molecular association, solvate formation and ionization.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 871-880.

Masson, James Irvine Orme, in a contribution on the solubility of electrolytes in aqueous solutions, discusses the solubility of salts in the corresponding acids.—*Ibid.* pp. 1132-1139.

Dimroth, Otto, reports some additional observations on the influence of the solvent on the rapidity of reaction and on valency.—*Ann. Chem.* 1910, v. 377, pp. 127-163.

Merton, Thomas Ralph, reports observations on the absorption spectra of permanganates in certain solvents.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 637-639.

v. Georgievics, G., in a contribution on adsorption in solutions, discusses the dualistic nature of adsorption phenomena.—*Monatsh. Chem.* 1911, v. 32, pp. 1075-1087.

Jones, William Jacob, discusses the determination of solubility coefficients by aspiration.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 392-404.

A book review (*Chem. Ind.* 1911, v. 34, p. 139) calls attention to a work on "Solubility Theories and Their Historical Sequence," by P. Walden.

An editorial (*Am. Druggist*, 1911, v. 58, p. 208) discusses Hygienic Laboratory Bulletin No. 67, on the solubilities of pharmacopœial substances.

Additional references on solution and the theories of solution will be found in *Chem. Abstr.*, and *Chem. Centralbl.*

MELTING POINT DETERMINATIONS.

An unsigned article (*Pharm. Ztg.* 1911, v. 56, p. 193) describes and illustrates several forms of melting point apparatus required by the Ph. Germ. V.

Linke, H., comments on the present Ph. Germ. V method for determining melting points of chemical substances, and expresses the belief that the use of a glass stirring rod is objectionable, because of the danger of breaking the flask containing the strong sulphuric acid.—*Ber. pharm. Gesellsch.* 1911, v. 21, p. 181.

Heyl, Georg, in discussing the tests of the Ph. Germ. V, describes and illustrates an apparatus for the determination of melting point, and presents a table giving the official Ph. Germ. V melting point of a number of substances.—*Apoth.-Ztg.* 1911, v. 26, p. 444. See also *Am. Druggist*, 1911, v. 58, p. 35.

Menge, G. A., expresses the opinion that the Ph. Germ. V methods and procedure for the determination of the melting points, freezing points, and boiling points of pharmacopoeial substances, represent both progress and retrogression, though the former doubtless predominates. He thinks the most serious defect in the new method is the absence of stirring. He also criticizes the apparatus required.—*Am. J. Pharm.* 1911, v. 83, p. 226.

Frerichs and Mannheim discuss the determination of the melting point and of the congealing point according to the Ph. Germ. V, and make a number of suggestions for modifying the methods.—*Apoth.-Ztg.* 1911, v. 26, pp. 544-545.

Heyl, Georg, discusses the Ph. Germ. V method for determining the congealing point of official substances.—*Apoth.-Ztg.* 1911, v. 26, p. 445.

Siedler, P., discusses the determination of melting points of fats and fatty substances, according to the method outlined in the Ph. Germ. V, and presents a table showing the results obtained by him.—*Pharm. Ztg.* 1911, v. 56, pp. 1002-1003. See also *Chem. & Drug.* 1911, v. 78, p. 229.

Ingenlath describes and illustrates an S-shaped capillary tube, designed to overcome objections to the Ph. Germ. V method for determining melting point of fats as outlined by P. Siedler.—*Pharm. Ztg.* 1911, v. 56, p. 1039.

Stüwe, W., outlines a modification of the Ph. Germ. V method for determining the melting point of fats and similar substances.—*Apoth.-Ztg.* 1911, v. 26, p. 677.

v. Liebermann, L., describes and illustrates an apparatus for the estimation of the melting point of fats.—*Ztschr. Unters. Nahr. u. Genussm.* 1911, v. 22, pp. 294-295.

Stevens, A. B., states that at the present time the methods of determining melting points are so variable that uniform results can not be expected. A complicated method need not be selected, but it should be so clearly described that there may be no difficulty in the application of the test.—*Pacific Pharm.* 1911, v. 5, p. 85.

Plaut, Albert, points out that the one-time difficulties in connection with the determination of melting points do not now exist, because the Revision Committee is being assisted by all the laboratories of the country.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 29.

Murray, B. L., expresses the belief that the melting point of a mixture of alkaloids such as veratrine is not of great moment and could be dispensed with.—*Ibid.* p. 15.

Anthes, E., describes and illustrates a modified continuous circulating bath apparatus for the determination of the melting point.—*Chem. Ztg.* 1911, v. 35, p. 1375.

Stoltzenberg, H., discusses the utilization of the melting point apparatus for low temperatures as an easily regulated cold bath in the physico-chemical laboratory.—*Ztschr. physik. Chem.* 1910, v. 71, pp. 649–651.

Timmermans, J., reports studies on the congealing point of organic liquids and presents a table showing the congealing point of various liquids as determined by different authors.—*Bull. Soc. chim. Belg.* 1911, v. 25, pp. 300–327.

Seidell, Atherton, describes and illustrates a convenient arrangement for providing constant stirring of the sulphuric acid, or other bath, in making melting point determinations.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 83–84.

The conference meeting of the Executive Committee is reported to have adopted a resolution calling upon the Hygienic Laboratory to furnish for the introductory chapter in the U. S. P. methods for determining melting and boiling points and solubilities with the idea of insuring uniformity of method.—*Pharm. Era*, 1911, v. 44, p. 4.

Jones, G. C., reviews Menge's work on melting point determinations (*Bull. Hyg. Lab.* No. 70).—*Analyst*, 1911, v. 36, p. 438. See also *Am. J. Pharm.* 1911, v. 83, p. 30, and *Chem. & Drug*. 1911, v. 78, p. 21.

BOILING POINT DETERMINATIONS.

Menge, G. A., calls attention to the method of determining the boiling point as described in the *Ph. Germ. V*.—*Am. J. Pharm.* 1911, v. 83, p. 228.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 126) point out that the indications relating to the boiling point as given in the *Ph. Germ. V* are far from being sufficient to insure correct results. Only the approximate capacity of the flask is indicated, and it is laid down that the mercury bulb must be placed 1 centimeter below the delivery tube, and that the heating must be conducted in an air bath, with the addition of fragments of porous plate in order to prevent bumping.

Richter, R., comments on the *Ph. Germ. V* methods for determining the boiling points of official substances, and suggests that in determining the boiling point according to the Siwoloboff method, it is desirable to modify the *Ph. Germ. V* process by eliminating the use of sulphuric acid.—*Pharm. Ztg.* 1911, v. 56, pp. 436–437.

Heyl, Georg, describes and illustrates the apparatus necessary for determining the boiling point of official *Ph. Germ. V* substances and presents a table of the official boiling point requirements.—*Apoth.-Ztg.* 1911, v. 26, pp. 445–446.

An editorial (*Am. Druggist*, 1911, v. 58, p. 36) outlines the methods given in the Ph. Germ. V for determining the boiling point of several official substances.

Jönsson, August, presents a communication on boiling point determinations, with illustrations of apparatus and tabulated results.—*Svensk. farm. Tidskr.* 1911, v. 15, pp. 1–5.

Murray, B. L., suggests that the boiling points of admittedly impure products might be omitted, or a suitable range in boiling point could be used.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 15.

Berkely and Appleby report observations on the variation of the boiling point of water caused by the height of the column of the liquid. Also report on the boiling points of some saturated aqueous solutions.—*Proc. Roy. Soc. Lond.* 1911, v. 85, pp. 477–505.

Smith and Menzies describe and illustrate a new method for determining boiling points under constant conditions.—*Ztschr. physik. Chem.* 1911, v. 75, pp. 494–497.

They also report a widespread thermometer error in the determination of boiling points under reduced pressure.—*Ibid.* p. 498.

Le Bas, Gervaise, discusses the influence of constitution on the molecular volumes of organic compounds at the boiling point.—*Chem. News*, 1911, v. 104, pp. 151–153, 187–189, 199–201.

Greenwood, H. C., discusses the boiling points of metals, with illustrations of the apparatus used in their determination.—*Ibid.* pp. 31–33, 42–45.

THERMOMETRY.

Peebles, James Clinton, discusses, with illustrations, the measurement of temperature by various forms of thermometers, pyrometers, and recording devices.—*Chem. Eng.* 1911, v. 13, pp. 68–74.

Seidell, Atherton, in reviewing the Ph. Germ. V, calls attention to the absence of standard temperature requirement for determining the several physical constants, and points out that specific gravity is to be determined at 15°, while optical rotation is to be determined at 20°.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 185.

Linke, H., regrets that the Ph. Germ. V has retained 15° as the temperature at which the specific gravity of official substances is to be determined. He thinks this temperature is usually from 2° to 3° lower than room temperature which, as defined by the Pharmacopœia itself, may vary from 15° to 20°.—*Ber. pharm. Gesellsch.* 1911, v. 21, p. 178.

Stevens, A. B., states it is unfortunate that different standards of temperature are in vogue in different countries, and even in different parts of the same country. In these days of international commerce, it would be far better if all were to adopt the same standard temperatures for taking specific gravities, determining solubilities, and volumetric measurements.—*Pacific Pharm.* 1911, v. 5, p. 85.

Wulff, C., regrets that the Ph. Germ. V did not adopt the U. S. P. standard temperature of 25° for determining specific gravity.—*Ber. pharm. Gesellsch.* 1911, v. 21, p. 205.

Raubenheimer, Otto, thinks it desirable that the standard temperature for specific gravity determinations should be changed to 15°, because of the difficulty of obtaining apparatus standardized at 25° and of comparing the specific gravities determined at different temperatures.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 30.

Murray, B. L., prefers 15° as the standard temperature, and thinks that the U. S. P. should give a little leeway, say 2°.—*Pharm. Era*, 1911, v. 44, p. 12.

Kühn, A., describes and illustrates correction divisions for the variation of emergent stem in mercury thermometers.—*Chem. Ztg.* 1911, v. 35, p. 373.

Thompson, G. W., in discussing the importance of a standard temperature for specific gravity determinations, and for standardizing measures of capacity, points out that if specific gravity determinations were made at 4° it would be a simple matter to calculate the weight of a given volume of liquid.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 256-257.

Stevens, A. B., thinks that it would be a mistake to require that volumetric solutions be used at a stated temperature, and points out that a change of 8° in temperature will not change the volume of an aqueous solution more than one-tenth cc. for each 100 cc.—*Pacific Pharm.* 1911, v. 5, p. 86.

Morgan, Livingston R., describes and illustrates a simple constant temperature bath for use at temperatures both above and below that of the room.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 344-349. Also *Ztschr. physik. Chem.* 1911-1912, v. 78, pp. 123-128.

Marshall, Hugh, presents some notes on thermostats.—*Chem. News*, 1911, v. 104, p. 295. See also Cumming, Alexander Charles, p. 307.

POLARIZATION AND REFRACTION.

Düsterbehn, F., states that the Ph. Germ. V has included requirements for the polarization of a number of chemical products; compliance therewith is not required to be checked by the apothecary, and the factors are given rather as indications.—*Apoth.-Ztg.* 1911, v. 26, p. 106.

Berlinger, George M., notes that the Ph. Germ. V polariscope readings are by sodium light at a temperature of 20° unless otherwise stated. In essential oils the figures are for readings with a 100 mm. tube.—*Am. J. Pharm.* 1911, v. 83, p. 329. Also *Proc. New Jersey Pharm. Assoc.* 1911, p. 77.

Linke, H., points out that the requirements for optical rotation included in the Ph. Germ. V are for information only, and are not necessarily obligatory.—Ber. pharm. Gesellsch. 1911, v. 21, p. 172.

Güth, Heinrich, discusses polarization, describes the apparatus, and reviews the requirements made in the Ph. Germ. V.—Pharm. Zentralh. 1911, v. 52, pp. 153–158.

Heyl, Georg, presents a table of the optical rotatory powers of official Ph. Germ. V substances, and points out that these figures refer to sodium light at 20°.—Apoth.-Ztg. 1911, v. 26, p. 454.

Gore, H. C., describes and illustrates an electrically controlled, constant temperature water bath for the immersion refractometer.—J. Ind. & Eng. Chem. 1911, v. 3, pp. 506–507.

Pingriff, G. N., describes and illustrates a simple method for finding the refractive index of a liquid which is available only in small quantities.—Pharm. J. 1911, v. 87, p. 624.

Fouracre, Robert, calls attention to an error in the formula above referred to.—*Ibid.* p. 770.

Pellet, H., discusses the determination of the rotatory power of certain organic substances in the presence of lead reagents.—Ann. chim. analyt. 1911, v. 16, pp. 215–218.

Pickard and Kenyon report investigations on the dependence of rotatory power on chemical substitution, and discuss the rotation of the simpler secondary alcohols of the fatty series.—J. Chem. Soc. Lond. 1911, v. 99, pp. 45–72.

Hilditch, Thomas Percy, discusses the relative effect of ethylenic and acetylenic linkings on optical rotatory power.—*Ibid.* pp. 218–239.

Inglis, John Kenneth Harold, in a contribution on the optical properties of compounds containing an asymmetric "quaternary" carbon atom, discusses the synthesis of *b*-phenyl-*b*-methylvaleric acid and of *as*-methylethylsuccinic acid.—*Ibid.* pp. 538–544.

Merwin, H. E., presents a note on quartz and fluorite as standards for density and refractive index.—Am. J. Sc. 1911, v. 182, pp. 429–432.

Eijdsman, F. H., Jr., discusses the recognition of absorption spectra.—Chem. Weekblad, 1911, v. 8, pp. 123–131.

Purvis, John Edward, discusses the absorption spectra of various chlorine and bromine derivatives of benzene and toluene, as vapors, in solution, and in thin films.—J. Chem. Soc. Lond. 1911, v. 99, pp. 1699–1712.

Eijdsman, F. H., jr., reports observations on the recognition of coloring matter by means of the spectroscope.—Chem. Weekblad, 1911, v. 8, pp. 333–340.

Landau, B., presents a review of the recent literature relating to stereo-chemistry and optical rotation.—Fortschr. Chem. 1911, v. 4, pp. 25–33.

5. APPARATUS.

Henrich, Ferd., describes, with illustrations, some old chemical apparatus.—*Chem. Ztg.* 1911, v. 35, pp. 197–199, 214–216.

Brown, Linwood A., urges upon pharmacists the making of a number of simple pharmacopœial tests, which he enumerates, and states that none of the methods mentioned call for more than two 50 cc. burettes, a few Erlenmeyer flasks or beakers, and a few 100 cc. graduated flasks, with less than half a dozen standard solutions.—*Proc. Kentucky Pharm. Assoc.* 1911, p. 97.

An unsigned article (*Apoth.-Ztg.* 1911, v. 26, p. 963) describes and illustrates several new forms of test tubes.

An unsigned article (*Pharm. Ztg.* 1911, v. 56, pp. 191–193) describes and illustrates some of the apparatus required by the Ph. Germ. V. See also *Am. Druggist*, 1911, v. 58, p. 36.

Mayer, Joseph L., presents a brief note on the use of the hot plate in the drug store.—*Am. Druggist*, 1911, v. 58, p. 380.

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lactate as an agent of defecation and the production of fluorescence.—*J. Pharm. et Chim.* 1911, v. 3, p. 191.

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An unsigned note states that a number of the newer drugs color the urine as though it contained blood. Among these are sulphonal and pyramidon. Others give it a blackish or smoky color, among them being carbolic acid and many derivatives of benzol. Still another group of drugs causes a greenish or yellowish discoloration in the urine, which might be mistaken for bile. Among these are bromoform, thallin, naphthol, santonin, buckthorn, cascara sagrada, rhubarb, and senna.—*Pract. Drug.* 1911, v. 29, Feb., p. 35.

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Barberio, M. (*Policlinico*, 1911, v. 18, No. 17), comments on the great importance of examining the urine for indican as a sign of disease, and recommends a 1:2000 solution of sodium nitrite for the reagent. Further details are given in the abstract.—*J. Am. M. Assoc.* 1911, v. 56, p. 1697; also *Pharm. J.* 1911, v. 87, p. 231.

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Fernau, Albert, reports some observations on the iodometric determination of sugar in urine.—*Ztschr. allg. österr. Apoth.-Ver.* 1911, v. 49, pp. 85–86.

Bang, Ivar, discusses the titration of sugar in urine.—*Pharm. Ztg.* 1911, v. 56, p. 436.

Woodyatt and Helmholtz report the results of their use of blood charcoal as a clearing agent for urine containing glucose, and assert that before any conclusions can be drawn from measurements made by the **Bang and Bohmannsson** method the individual sample of charcoal which is used should be thoroughly tested in control experiments.—*Arch. Int. Med.* 1911, v. 7, pp. 598–601.

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de Jager, L., outlines a new test for sugar, in which the **Trommer** method has been modified so as to use milk of lime in place of sodium hydroxide solution.—*Zentralbl. Physiol. u. Path. Stoffwechs.* 1911, v. 6, pp. 630–633, 713–716.

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Wolter discusses the colorimetric estimation of sugar, creatine, and creatinine in urine.—*Pharm. Ztg.* 1911, v. 56, p. 436.

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cable for the quantitative estimation of blood sugar.—*Zentralbl. Physiol. u. Path. Stoffwechsels.* 1911, v. 6, pp. 665-674.

Wacker, Leonhard, comments on the paper by Forschbach and Severin, and points out that they did not follow his method in detail.—*Ibid.* pp. 524-528.

Oppler, Berthold, discusses the determination of glucose in urine and in blood.—*Ztschr. physiol. Chem.* 1911, v. 75, pp. 71-134.

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Bernier has established the presence, if not constantly, very frequently, of saccharose in urine, and proposes a technique for its estimation.—*J. Pharm. et Chim.* 1911, v. 3, p. 209.

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Hawk, P. B., reports that the postanæsthetic glycosuria, observed in his series of experiments on dogs, was due primarily to the effect of the ether in stimulating the transformation of glycogen into dextrose. Dyspnoea may also have been a contributing factor.—*Arch. Int. Med.* 1911, v. 8, pp. 39-57.

Swan, John M., reports the results of his study of postanæsthetic glycosuria in 16 surgical patients.—*Ibid.* p. 58.

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Escales, R., reports some observations on ammonium cyanate and urea, and points out that urea, when heated in a vacuum to between 160° to 190°, is again converted into ammonium cyanate.—*Chem. Ztg.* 1911, v. 35, p. 595.

Wakeman and Dakin present a note upon the relationship between urea and ammonium salts.—*J. Biol. Chem.* 1911, v. 9, pp. 327-328.

Ekecrantz and Söderman outline a modification of the Riegler method for the determination of urea in urine.—*Ztschr. physiol. Chem.* 1911-1912, v. 76, pp. 173-176.

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Cathelin, F. presents a comparative table of the medical and surgical affections of the kidney, and discusses particularly the conditions with reference to urea.—*Ibid.* v. 70, p. 761. See also Mayer, p. 830.

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Vitali, Dioscoride, discusses the iodometric determination of uric acid in urine.—*Boll. chim. farm.* 1911, v. 50, pp. 365-366. See also pp. 799-803.

Izar, G., presents a contribution to our knowledge of the formation of uric acid.—*Ztschr. physiol. Chem.* 1911, v. 73, pp. 317-334.

Stevens and May report some observations on the decomposition of uric acid by organic alkaline solvents.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 434-447.

Pizzorno, P. P., outlines a method for the rapid estimation of uric acid in urine, by means of iodine.—*Boll. chim. farm.* 1911, v. 50, pp. 237-238. See also *Pharm. Ztg.* 1911, v. 56, p. 922.

Cappon, F., outlines the conditions which favor the precipitation or solution of uric acid in the urine.—*Compt. rend. Soc. Biol.* 1911, v. 71, p. 433.

A contributor to "Notes and Queries" (*Drug. Circ.* 1911, v. 55, p. 415) discusses the Hopkins-Folin method for the estimation of uric acid.

Cambridge reaction.—Cambridge, P. J., discusses chronic pancreatitis, with especial reference to the diagnosis and treatment.—*Lancet*, 1911, v. 180, pp. 1494-1498. See also editorial, p. 1524.

Roper and Stillman present a study of the technique of the Cambridge reaction and of the substance giving rise to the so-called typical crystals. They conclude that the "C" reaction, proposed by Cambridge for the demonstration of a characteristic substance in the urine of patients suffering from diseases of the pancreas, does not rest on a sound scientific basis, as not all the glycuronic acid is removed in every instance by the technique of this reaction.—*Arch. Int. Med.* 1911, v. 7, pp. 252-258.

Bernier questions the clinical value of the Cambridge reaction. He shows that the reaction is due to an osazone which is a mixture of glycuosazone and glucosazone. He considers that glycuronic acid is a normal element of urine.—*J. Pharm. et Chim.* 1911, v. 3, p. 209.

Grimbert and Turpaud have established the fact that the osazone, to which the Cambridge reaction gives rise, is formed by glycuronic acid. Bernier presents a precise and easily applied method for the detection of glycuronic acid by the reaction of Tollens after defecation by mercury acetate.—*Ibid.* p. 192.

Pearson, William A., states that the systematic examination of fæces is not frequently enough practiced. The importance of the detection of intestinal parasites or their ova is not denied, yet the presence of blood is often of greater importance. This test is not difficult to perform.—Hahnemann. Month. 1911, v. 46, p. 572.

Eberhard, H. M., discusses the significance and importance of testing for occult blood in the fæces.—*Ibid.* pp. 174–178.

Oddo and Sauvan present a note on the detection of hidden hæmorrhages in typhoid fever by means of Weber's reaction.—Compt. rend. Soc. Biol. 1911, v. 70, p. 399.

Soper, Horace W., finds it unnecessary to use freshly prepared tincture of guaiac for the detection of occult blood in the fæces and stomach contents; he thinks it more liable to variation than an older preparation.—J. Am. M. Assoc. 1911, v. 56, p. 263.

Boas, J. (Deut. med. Wchnschr. 1911, p. 62) discusses the use of phenolphthalein as a reagent for occult blood in fæces.—Apoth.-Ztg. 1911, v. 26, p. 58.

Ganassini, Domenico, outlines a new chemical reaction for blood and discusses its use in the recognition of blood stains and the detection of blood in fæces.—Boll. chim. farm. 1911, v. 50, pp. 57–67.

Newbold, William A., calls attention to a source of error in the test for occult blood in fæces, due to the ingestion of watermelon.—J. Am. M. Assoc. 1911, v. 57, p. 1532.

Weill, Morel and Policard describe the biliary pigments of the stools of nurslings and the technique of their recognition.—Bull. Soc. chim. France, 1911, v. 9, pp. 572–575.

de Jager, L., comments on the estimation of albumen in fæces according to the method outlined by Heynsius.—Zentralbl. Physiol. u. Path. Stoffwechs. 1911, v. 6, pp. 629–630.

Hawk, P. B., outlines a modification of Wohlgemuth's method for the quantitative study of the activity of the pancreatic function.—Arch. Int. Med. 1911, v. 8, pp. 552–556.

Rochaix, P., presents certain experimental and clinical results in the estimation of fats in fæcal matter.—J. Phys. et Path. gén. 1911, v. 13, pp. 414–420. See also p. 885 for his reply to Terroine.

Gunn, Herbert, discusses the examination of fæces in the detection of hookworm disease.—Tr. Am. M. Assoc. Sec. Pharm. & Therap. 1911, pp. 68–73.

Mattill and Hawk present a method for the quantitative determination of fæcal bacteria. They conclude that the amount of bacterial nitrogen in the fæces is a valuable index to intestinal conditions, and the method described is a simple and satisfactory one for making this determination.—J. Exper. M. 1911, v. 14, pp. 433–444.

Moore, Veranus A., reports his observations on the elimination of tubercle bacilli from infected cattle.—J. M. Research, 1911, v. 24, pp. 517-525.

Reichel and Deubler, after an examination of 40 cattle, conclude, among other things, that the microscopic examination of the fæces or rectal scrapings of cattle for tubercle bacilli is of no value. The injection of guinea pigs with fæces and rectal scrapings of cattle is a valuable, although not an infallible, test.—*Ibid.* pp. 5-14.

GASTRIC CONTENTS.

Goldman, Alexander, contributes a note on test breakfast *versus* fasting stomach contents.—N. York M. J. 1911, v. 93, pp. 882-883.

Roberts, Dudley, advocates a new test breakfast, consisting of lactose added to weak tea to the strength of 10 per cent.—J. Am. M. Assoc. 1911, v. 56, p. 1752.

Chance, Arthur F., presents a tabulated statement of the comparative results of dry and wet test meals.—*Ibid.* v. 57, p. 23.

Holmgren, Y., outlines a new method for the quantitative estimation of free acids in gastric juice.—J. Pharm. et Chim. 1911, v. 4, p. 360.

Harrower, Henry R., describes and illustrates an accurately graduated test tube for the determination of gastric acidity.—Am. Med. 1911, v. 17, p. 548.

Fischer, Charles Sumner, suggests a possible source of error in gastric analysis. He thinks that too great reliance can not be placed upon casual gastric analysis.—N. York M. J. 1911, v. 93, pp. 883-884.

Morgan, William Gerry, details some experiences with the Einhorn duodenal bucket and a modified thread test, with a tabulated statement of results and several illustrations.—Am. J. M. Sc. 1911, v. 141, pp. 649-658.

Benedict, A. L., describes the effervescence test for gastric acidity.—N. York M. J. 1911, v. 93, p. 466.

Fisher, Jessie Weston, points out that in digestive disorders several useful bits of information can be obtained from the microscopical and chemical examination of the stomach contents, providing these findings are properly interpreted.—Boston M. & S. J. 1911, v. 165, pp. 11-12.

Pearson, William A., states that it is a great regret that the general medical practitioner does not more frequently examine the stomach contents. A valuable opportunity is often lost to practice scientific medicine. The detection of free hydrochloric or lactic acid and the estimation by Topfer's method of total acidity, free and combined hydrochloric acid is not at all difficult and is of considerable diagnostic importance.—Hahnemann. Month. 1911, v. 46, p. 572.

Sartory and Fabre make a contribution to the study of certain hyperacid gastric juices.—Bull. sc. pharmacol. 1911, v. 18, p. 218.

Additional references will be found in Index Med.; J. Am. M. Assoc.; and Chem. Abstr.

SPUTUM.

Eurich, F. W., outlines Koslow's method for the detection of tubercle bacilli in sputum. The advantages claimed for this method are cleanliness, simple armamentarium, more sure and accurate results.—Brit. M. J. 1911, v. 2, p. 596.

Gettings, H. S., challenges the results of Lesieur and Prirey, and states that in 39 cases in which tubercle bacilli were present albumin was present in 18 or 46.2 per cent.—Lancet, 1911, v. 181, p. 1660. See also p. 1802.

Fishberg, Maurice, reports observations on the albumin reaction of the sputum in pulmonary tuberculosis and asserts that this reaction can be considered a valuable addition to our diagnostic acids.—Med. Rec. 1911, v. 80, pp. 870-873.

Goodman, Edward H., discusses the diagnostic importance of albumin and albumose in the sputum, and their relation to occult blood.—Arch. Int. Med. 1911, v. 8, pp. 162-168.

de Leuze, C., states that the albumin reaction for tuberculous sputum is clinically of diagnostic value only within certain limits.—J. Pharm. Anvers, 1911, v. 67, pp. 914-916.

Remlinger, P., contributes a brief note on the albumin reaction of sputum.—Compt. rend. Soc. Biol. 1911, v. 70, p. 358.

An editorial (Lancet, 1911, v. 181, p. 1084) calls attention to the value of the albumin reaction in tuberculous sputum, outlines the technique and refers to the recent paper of Lesieur and Prirey, who give the results of 840 observations.

Raw, Nathan, is not prepared to draw a final conclusion from his study of the albumin reaction in tuberculous sputum in 110 cases, and will seek further experience.—Brit. M. J. 1911, v. 2, p. 1470.

Karwacki, Léon, presents a note on the presence of agglutinins in tuberculous sputum (sputoagglutination), with reports of a number of cases.—Compt. rend. Soc. Biol. 1911, v. 70, p. 272.

Karwacki and Otto present a note on the reaction of fixation with tuberculous sputa, with a tabulated statement of results in a number of cases.—*Ibid.* v. 71, p. 523.

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Bang, Ivar, presents a preliminary report of a study on the action of diastase.—*Ibid.* v. 32, pp. 417-442.

Lebedeff, Alexandre, concludes that zymase is a typical diastase.—*Bull. Soc. chim. France*, 1911, v. 9, pp. 672-682. See also pp. 744-750.

Agulhon, Henri, discusses the mechanism of the destruction of diastase by light.—*Compt. rend. Acad. Sc.* 1911, v. 153, pp. 979-982. See also v. 152, p. 398.

Wohlgemuth, J., in a contribution on the action of diastase, discusses the influence of serum, of lymph, and other organic juices on the action of diastase.—*Biochem. Ztschr.* 1911, v. 33, pp. 303-314.

Gerber, C., discusses the action of the salts of alkali metals on the saccharification of starch by amylolytic ferments.—*Compt. rend. Soc. Biol.* 1911, v. 71, pp. 41–47. See also pp. 208 and 247.

Euler and Johansson discuss the formation of invertase in yeasts.—*Ztschr. physiol. Chem.* 1911–1912, v. 76, pp. 388–395.

v. Lebedew, A., discusses the preparation of an active yeast juice by means of maceration.—*Ibid.* 1911, v. 73, pp. 447–452.

Herzog and Saladin discuss the changes of the fermentative properties suffered by yeast cells on killing with acetone.—*Ibid.* pp. 263–283.

Euler and Kullberg report observations on the behavior of free and combined yeast enzymes.—*Ibid.* pp. 85–100.

Kowalevsky, Katharina, presents some observations on the composition of nucleinic acid from yeast.—*Ibid.* 1910, v. 69, pp. 240–264.

Kiby, W., discusses the modern manufacture of compressed yeast.—*Chem. Ztg.* 1911, v. 35, pp. 421–423, 434–436.

Ginzberg, Alexander, reports observations on the chemical processes involved in the koumys and kefir fermentations.—*Biochem. Ztschr.* 1911, v. 30, pp. 1–38.

Mason, Frédéric S., presents a note on the way in which pure-milk cultures of lactic ferments may be obtained.—*N. York M. J.* 1911, v. 93, pp. 60–62. See also pp. 1026–1030.

Additional references on enzymes will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Exper. Sta. Rec.*; *Zentralbl. Biochem. u. Biophysik*; and *Chem. Centralbl.*

2. DISINFECTANTS.

Rogers, R. R., reviews the history of disinfectants and calls attention to some of their uses. He points out the desirability of standardizing articles widely used as disinfectants.—*Pacific Pharm.* 1911, v. 5, pp. 167–173.

Dreyfus, William, discusses the nature of germicides and antiseptics and the application of chemical substances generally as disinfectants.—*Rev. Am. Farm. y Med.* 1910–1911, v. 15, April, pp. 17–19. Also *Am. Druggist*, 1911, v. 58, pp. 209–210.

Herzog and Betzel present some observations on the theory of disinfection.—*Ztschr. physiol. Chem.* 1911, v. 74, pp. 221–241.

An editorial (*Med. Rec.* 1911, v. 79, p. 1148) discusses the standardizing of disinfectants, and quotes Charles V. Chapin, who considers disinfection superfluous in the light of the theory that disease-producing bacteria begin to lose their virulence and die almost as soon as cast off. See also *N. York M. J.* 1911, v. 93, p. 280.

Rogers, R. R., contributes a paper on disinfectants.—*Western Druggist*, 1911, v. 33, pp. 631–634.

Delépine, S., makes a contribution to the study of chemical disinfectants, with several illustrations of apparatus used.—*J. Soc. Chem. Ind.* 1911, v. 30, pp. 334-343.

Schneider, Albert, discusses disinfectants and disinfecting; also comments on food preservatives and insecticides.—*Merck's Rep.* 1911, v. 20, pp. 281-283, 306-308, 332-333. See also *Pacific Pharm.* 1911, v. 5, pp. 335-339, and *Drug Topics*, 1911, v. 26, p. 377.

Gathercoal, E. N., in a paper entitled "Bacteriology for the Pharmacist," discusses disinfection, sterilization, etc.—*Western Druggist*, 1911, v. 33, pp. 171-176.

Lüders, Richard, reviews the progress made in connection with antiseptics and disinfectants during the year 1910.—*Chem. Ind.* 1911, v. 34, pp. 151-156.

Hunt, Reid, reports that the Tenth International Congress of Pharmacy, held at Brussels, September 1-6, 1910, adopted a resolution recommending that antiseptics and disinfectants should not be placed on the market until they have been officially examined both chemically and bacteriologically, and have received the approval of the departments of public health.—*Am. J. Pharm.* 1911, v. 83, p. 25.

An editorial (*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 102) points out that the food and drugs law of Maryland provides that disinfectants be labeled according to their carbolic acid coefficient.

Dougan, Peter, discusses the standardization of disinfectants and outlines the Hygienic Laboratory method as described by John F. Anderson.—*Pacific Pharm.* 1911, v. 5, pp. 305-315. See also *Lancet*, 1911, v. 180, p. 43.

Marchant, F. T., presents a note on the carbolic acid coefficient of disinfectants, and describes a simple apparatus which he has devised to do away with the use of platinum loops or spoons.—*Lancet*, 1911, v. 181, p. 1267. See also p. 1282.

An editorial note (*Brit. M. J.* 1911, v. 1, p. 157) calls attention to a useful summary, by Sheridan Delépine, of the many factors which must be taken into consideration in attempting to compare the real efficiency of disinfectants by laboratory tests.

Crumbine, S. J., presents a report on disinfectants and standards for same and proposes the following definition: Disinfectant.—An article or substance which is designated as "germicide" or "disinfectant" in the State of Kansas will be held to be of such a character that it will actually kill any nonspore-bearing bacterium within six hours under the conditions prescribed for its use.—*Bull. Kansas Bd. Health*, 1911, v. 7, pp. 199-201.

Roberts and McDermott report on an original form of sulphur burner for disinfection.—*Public Health Reports*, 1911, v. 26, pp. 403-410.

Neumann and Mosebach, Symanski, and Fisher contribute to a discussion on the action of disinfectants in filled privy vaults and the longevity of typhoid bacilli in such vaults. Fisher concludes that milk of lime, from freshly calcined lime, is the best and most economical disinfectant.—*Arb. k. Gsndhtsamte*, 1911, v. 38, pp. 187–204.

An unsigned article reviews and illustrates the method of disinfecting rooms by means of formaldehyde and potassium permanganate.—*Pharm. Post*, 1911, v. 44, pp. 427–429. See also *Pharm. J.* 1911, v. 87, p. 233. Also *Drug Topics*, 1911, v. 26, p. 330.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, notes that while cresol, crude and saponified, especially recommended by the Superior Council of Hygiene as preventives and prophylactics against transmissible diseases, are to be found in the stores, their use has not become popularized. It is added that the variety of products sold, by reason of absence of well defined characters, is not of a nature to inspire confidence.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 226.

Additional references on disinfection and disinfectants will be found in *J. Am. M. Assoc.*; *Chem. Abstr.*; *Exper. Sta. Rec.*; *Zentralbl. Biochem. u. Biophysik.*; *Hyg. Rundschau*; and *Chem. Centralbl.*

6. VEGETABLE DRUGS.

Tschirch comments on some of the modern problems of pharmacognosy.—*Schweiz. Wehnschr. Chem. u. Pharm.* 1911, v. 49, pp. 665–669, 679–683. See also *Bull. Soc. roy. pharm. Brux.* 1911, v. 55, pp. 281–298; *Bull. sc. pharmacol.* 1911, v. 18, pp. 486–496; and *Pharm. Post*, 1911, v. 44, pp. 959–962.

Kraemer, Henry, discusses the teaching of pharmacognosy.—*Am. J. Pharm.* 1911, v. 83, pp. 427–436.

Newcomb, Edwin L., in a discussion of pharmacognosy and its relation to practical pharmacy, points out the importance of pharmacognostic training in determining the value and identity of pharmacopœial drugs.—*Proc. Minnesota Pharm. Assoc.* 1911, pp. 80–82.

Mitlacher, Tunmann, and Winckel present a review of recent literature relating to pharmacognosy.—*Pharm. Post*, 1911, v. 44, pp. 253 ff. See also pp. 979 ff.

Tschirch, A., discusses the practicability of systematizing and grouping drugs according to chemical principles.—*Ber. pharm. Gesellsch.* 1911, v. 21, pp. 303–312.

Lloyd, John Uri, presents an outline of the history of the official vegetable drugs.—*Bull. Lloyd Libr.* 1911, No. 18, pp. 92. See also abstracts in *Eclectic Med. Glean.* 1911, v. 7, pp. 405–415.

Andresen, S., presents some notes on the origin of botanical gardens in Sweden.—*Apoth.-Ztg.* 1911, v. 26, pp. 297–299.

Holm, Theo., continues his description of medicinal plants of North America.—*Merck's Rep.* 1911, v. 20, pp. 4 ff.

Henkel, Alice, describes, with illustrations, American medicinal leaves and herbs.—Bull. No. 219, Bur. Plant Ind. U. S. Dept. Agric. 1911, pp. 56.

Newcomb, Edwin L., discusses the cultivation of medicinal plants at the College of Pharmacy of the University of Minnesota.—Am. J. Pharm. 1911, v. 83, pp. 526–533. See also Northwestern Druggist, 1911, v. 12, November, p. 19, and Proc. Minnesota Pharm. Assoc. 1911, pp. 87–96.

Kremers, Edward, discusses the collection and cultivation of medicinal plants in Wisconsin.—Meyers Bros. Drug. 1911, v. 32, pp. 172–173. See also Proc. Wisconsin Pharm. Assoc. 1911, p. 31.

Hood, Samuel C., presents a partial list of the wild drug plants cultivated in Florida. Among the official drugs are stillingia, gelsemium, prunus serotina, chenopodium, and sassafras.—Am. Druggist, 1911, v. 59, p. 10.

Wilbert, M. I., reports a list of drugs under cultivation at the experimental farm of the U. S. Department of Agriculture at Arlington.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 274.

Checkley, George, states that he has over 70 species of medicinal plants growing in his garden, 27 of them being in flower, including a list which he details.—Pharm. J. 1911, v. 87, p. 27.

Rosenthaler, L., reports on the occurrence and cultivation of vegetable drugs in southern Germany, and presents a list of the drugs collected or produced there.—Apoth.-Ztg. 1911, v. 26, pp. 885–889.

Sturm reports some additional observations on the vegetable drugs of southern Germany.—*Ibid.* p. 1019.

Mitlacher, Wilhelm, reports observations on the cultivation of drugs in Austria during the year 1910.—Pharm. Post, 1911, v. 44, pp. 201–204, 213–217.

An unsigned article reports on the results of the cultivation of drug plants in Hungary during the year 1910.—*Ibid.* pp. 624–625.

Senft, Emanuel, reports on the experiments made by the Government of Austria on the cultivation of drug plants, and presents a list of the plants under cultivation.—*Ibid.* pp. 891–895.

Cowley, R. C., contributes a brief note on drug growing in Queensland.—Chem. & Drug. 1911, v. 79, p. 662.

An unsigned article (Pharm. Ztg. 1911, v. 56, pp. 230–231) discusses the cultivation of vegetable drugs and calls attention to some of the recent articles on the subject.

An editorial (Pharm. J. 1911, v. 87, p. 587) calls attention to a recent article in the Gardener's Chronicle, and the reports of Scurti and Tommasi, upon the effect of cultivation on the content of toxic principles in vegetable drugs.

Peckolt, Th., continues his review of the medicinal plants of Brazil.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 273–279, 346–367.

Bourquelot, Em., discusses the sterilization and desiccation of medicinal plants.—*J. Pharm. et Chim.* 1911, v. 3, pp. 149–161. Also *Répert. pharm.* 1911, v. 23, pp. 180–183.

Muschler, Reno, discusses the collection and recognition of drug plants.—*Pharm. Ztg.* 1911, v. 56, pp. 503–504. See also *D.-A. Apoth.-Ztg.* 1911–1912, v. 32, pp. 57–58.

Meyer, Th., describes and illustrates an apparatus for the collection of medicinal flowers.—*Pharm. Ztg.* 1911, v. 56, p. 403.

Jackson, Joseph, discusses the source of supply of crude drugs in the future, and expresses the opinion that unless our natural products are conserved we face an ultimate drug famine.—*Pract. Drug.* 1911, v. 29, May, pp. 35–37.

The Apothecary (1911, v. 23, January, p. 28) reviews briefly certain precautions to be observed in the keeping of crude vegetable drugs.

Flemer, Lewis, calls attention to the preservation of plant drugs containing glucosides by the use of freshly calcined lime.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 89.

Méyer, Th., discusses the keeping of hygroscopic vegetable drugs and describes and illustrates a container to be used with drugs required to be kept over calcined lime or calcium chloride.—*Pharm. Ztg.* 1911, v. 56, pp. 217–218. See also *Pharm. Weekblad*, 1911, v. 48, p. 1342.

Brown, Linwood A., discusses the preservation of drugs, and calls attention to the best methods of storing drugs.—*Rocky Mountain Druggist*, 1911, v. 25, Jan., p. 21.

Rusby, H. H., asserts that the *Pharmacopœia* does not sufficiently well define the part of the plant contributing a drug.—*Pharm. Era*, 1911, v. 44, p. 94.

Plaut, Albert, thinks that there is need for improvement in the description of botanical drugs. He favors the deletion of the monographs on crude materials, and the description of each in connection with one compound into which it enters.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 29. See also *Pharm. Era*, 1911, v. 44, p. 12, and *Proc. N. W. D. A.* 1911, pp. 102–103.

True, Rodney H., points out that the *Ph. Germ. V* requirements for botanical drugs are systematically arranged, and that on the whole there is little or no opportunity for quibbling over the exact meaning of the several requirements.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 184.

Beringer, George M., states that the *Ph. Germ. V* reflects the great advances made in the science of pharmacognosy since the last revision. Microscopical descriptions are generally given.—*Proc. New Jersey Pharm. Assoc.* 1911, p. 77. Also *Am. J. Pharm.* 1911, v. 83, p. 329.

Gilg, Ernst, discusses the nature of the descriptions of crude drugs included in the Ph. Germ. V.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 5–12. See also Chem. & Drug. 1911, v. 78, p. 351.

Kebler, L. F., in discussing pharmacopœial standards from a practical point of view, suggests that the Pharmacopœia permit the presence of not exceeding 10 per cent of foreign material in many of the official drugs.—Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 18–22.

An editorial (*Ibid.* p. 5) endorses the suggestion that the U. S. P. permit reasonable percentages of foreign materials in vegetable drugs.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 5) think it important that pharmacopœias avoid the fixing of arbitrary standards for drugs which are unobtainable commercially or else can only be secured at a disproportionate cost.

Kroeber, Ludwig, emphasizes the need for specifying the particular Pharmacopœia with the requirements of which an article is to comply.—Apoth.-Ztg. 1911, v. 26, p. 995.

Beringer, George M., discusses the work of the committee on standards for unofficial drugs and chemical products and presents a list of articles now under consideration.—Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 141–142. See also Am. Druggist, 1911, v. 58, p. 15. See also Brit. & Col. Drug. 1911, v. 60, p. 447.

An editorial (J. Am. M. Assoc. 1911, v. 57) points out that one of the stumbling blocks in progressive medicine, so far as drug therapy is concerned, is the absurd number of drugs and combinations of drugs in the Pharmacopœia and in the dispensaries.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 108–109) discuss the determination of the moisture content of drugs and of powdered drugs.

Rabak, Frank, in a series of articles discusses the aroma of plants, its development, extraction, and the growth and harvesting of perfume plants.—Spatula, 1910–1911, v. 17, pp. 199, 279, 467, 531, 585, 656.

Guérithault, B., states that the results of his investigations lead him to think that copper is a constant element in vegetable tissues; they show also to what extent copper may be considered as a true physiologic element.—Bull. sc. pharmacol. 1911, v. 18, pp. 633–639.

Tunmann, O., discusses applied plant microchemistry and calls attention to some of the newer investigations in this field.—Pharm. Post, 1911, v. 44, pp. 847–849, 859–861, 867–871; and Ztschr. allg. österr. Apoth.-Ver. 1911, v. 49, pp. 441–442.

He also describes, with illustrations, the microchemical identification of gentian root and of asafetida.—Gehe & Co., Handelsbericht, 1911, pp. 155–162.

Schneider, Albert, presents some suggestions on microanalytical methods for the examination of drugs, foods, and spices, and enumerates several useful tests.—Merck's Rep. 1911, v. 20, pp. 33–35.

An editorial note (*Suedd. Apoth. Ztg.* 1911, v. 51, p. 708) reviews some of the recent literature on the microchemistry of plants.

Emich, F., reviews the progress made in microchemistry since the time of H. Behrens.—*Chem. Ztg.* 1911, v. 35, pp. 637–639, 663–665.

Rosenthaler, L., presents a contribution on the pyroanalysis of drugs.—*Ber. pharm. Gesellsch.* 1911, v. 21, pp. 338–346, 525–536. See also Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, pp. 635–636.

Tunmann, O., discusses microsublimation and the detection of arbutin in plants.—*Ber. pharm. Gesellsch.* 1911, v. 21, pp. 312–319.

Sanford, J. A., thinks that herbs and many vegetable drugs should be more carefully handled and be better cared for.—*Pacific Pharm.* 1911, v. 5, p. 281.

The report of the A. Ph. A. committee on drug market points out that there continues to be a marked improvement in the character of drugs and chemicals.—*Drug Topics*, 1911, v. 26, p. 275.

An editorial (*Drug Circ.* 1911, v. 55, pp. 66–67) reproduces a general letter from L. E. Sayre on behalf of the committee on drug reform of the American Pharmaceutical Association which emphasizes the need of a better standardization of drugs.

Rose, R. E., reports that of the samples of drugs examined in the laboratory 39 were found to be adulterated, 27 were misbranded, and 26 were both adulterated and misbranded.—*Bull. Florida Agric. Dept.* 1911, v. 21, p. 17.

Schneider, Albert, reports the examination of a number of vegetable drugs that are found on the Pacific coast. Of a total of 287 samples examined, 107 or 37 per cent were found to be adulterated.—*Pacific Pharm.* 1911, v. 5, pp. 176–181.

Brown, Lucius P., in commenting on the unsatisfactory conditions existing in connection with drugs and preparations sold in the State of Tennessee, asserts that few druggists in that State have undertaken to make proper corrections.—*Rep. Tennessee Bd. Health*, 1911, p. 34.

Wiley, H. W., reports that the quality of crude drugs continues to improve, but that experience shows that it is necessary to maintain strict inspection.—*Ann. Rep. U. S. Dept. Agric.* 1911, 1912, p. 424.

Lilly, J. K., reports that most of our difficulties now come from indigenous drugs. Gatherers of crude drugs in our country are not often educated botanists, competent to examine each plant with a magnifying glass and botanical key, hence it is not to be wondered at that admixture with other drugs should occur. It is very necessary to examine carefully every parcel of our American crude drugs to avoid the flooding of the market with inferior goods.—*Proc. N. W. D. A.* 1911, p. 158.

Rusby, H. H., discusses Government rectification of unfit drugs before admission and makes a number of suggestions in regard to the

possibility of improving the present source of supply for drugs.—Proc. New York Pharm. Assoc. 1911, pp. 287–292. Also Merck's Rep. 1911, v. 20, pp. 220–223; and Am. Druggist, 1911, v. 59, pp. 5–7.

Kebler, L. F., presents the referee report on medicinal plants and drugs.—Proc. Assoc. Off. Agric. Chem. 1911, 28th Ann. Conv., pp. 234–236. (Bull. Bur. Chem., U. S. Dept. Agric. 1912, No. 152.)

Stevens, A. B., points out that when foreign pharmacopœias require a high grade article and the United States Pharmacopœia either fixes a low standard or no standard at all it is only natural that drugs excluded from foreign countries should seek a market in the United States. If the Committee of Revision would place the standards where they belong, the United States would then cease to be a dumping ground for drugs of inferior quality.—Pacific Pharm. 1911, v. 5, p. 87.

1. POWDERED DRUGS.

Thurston and Thurston discuss the pharmacopœial requirements for vegetable drugs, and suggest that, in addition to the description of the crude drug, there should be appended microscopical and chemical tests for the powdered substance.—Proc. Ohio Pharm. Assoc. 1911, pp. 69–71. See also Drug Topics, 1911, v. 26, p. 280.

Noyes, C. R., proposes that an official diluent or adulterant be provided for all ground alkaloidal drugs, just as has been done in the case of granulated opium.—Proc. Minnesota Pharm. Assoc. 1911, p. 76.

Rusby, H. H., thinks that the ingenuity of the pharmacopœia revisers must be exercised in devising methods for the application of standards to drugs in powdered condition.—Pharm. Era, 1911, v. 44, p. 140.

True, Rodney H., points out that the microscopic structures of the several drugs have been carefully considered in connection with the monographs of the Ph. Germ. V; the compound microscope is therefore one of the pieces of apparatus that must be on hand in the shop of the apothecary.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 184.

Heyl, Georg, presents a table showing the limitations for size of starch grains and other structures described in the Ph. Germ. V.—Apoth.-Ztg. 1911, v. 26, p. 454.

Beringer, George M., points out that in the Ph. Germ. V, microscope measurements are stated in microns, the μ being equal to 1/1000 mm.—Proc. New Jersey Pharm. Assoc. 1911, p. 77. See also Am. J. Pharm. 1911, v. 83, p. 329.

Raubenheimer, Otto, thinks that the pharmacopœial description should be more definite, and that full attention should be given to powdered drugs.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 30. Also Pharm. Era, 1911, v. 44, p. 12.

A book review (*Am. J. Pharm.* 1911, v. 83, pp. 31-32) calls attention to the "Microscopical examination of foods and drugs," by Henry George Greenish. See also *Ber. pharm. Gesellsch.* 1911, v. 21, pp. 95-96.

A book review (*Pharm. Zentralh.* 1911, v. 52, pp. 271-272) discusses the microscopic analysis of drug powders by Ludwig Koch.

Tschirch, A., calls attention to the importance of hairs and other minor structures in determining the nature of drug powders.—*Schweiz. Wchnschr. Chem. u. Pharm.* 1911, v. 49, pp. 677-679.

Schneider, Albert, discusses the examination of powdered vegetable drugs and spices.—*Merck's Rep.* 1911, v. 20, pp. 2-4.

Lilly, J. K., expresses the belief that probably the most troublesome line in the matter of quality is powdered drugs. Practical experience proves that pure powders can be secured if a fair price is paid and good quality required, but where some sellers are crowded to very low prices the punishment is made to fit the crime.—*Proc. N. W. D. A.* 1911, p. 162.

Gilg, Ernst, in a discussion of the *Ph. Germ. V* descriptions of vegetable drugs, asserts that it is absolutely essential that the apothecary test all of the powdered drugs obtained by him for identity and purity.—*Ber. pharm. Gesellsch.* 1911, v. 21, p. 10.

Howard, Charles D., reports the examination of a number of powdered drugs and points out that in the absence of products of absolutely known purity it is not practicable to attempt to determine the presence or absence of certain more subtle forms of adulteration.—*New Hampshire San. Bull.* 1911, v. 3, No. 13, p. 254.

Tankard, Arnold Rowsby, calls attention to the large quantities of adulterated powdered drugs now on the market.—*Pharm. J.* 1911, v. 87, p. 73.

Kroeber, Ludwig, presents some additional arguments for the systematic microscopic examination of powdered drugs.—*Apoth.-Ztg.* 1911, v. 26, pp. 920-921.

Tunmann, O., reports observations on applied plant microchemistry and some of the newer observations in this field.—*Chem. Ztg.* 1911, v. 35, pp. 1103-1104.

"Wtz." describes a compound microscope that will comply with the requirements of the *Ph. Germ. V*.—*Pharm. Ztg.* 1911, v. 56, pp. 209-210.

Amann, J., describes a new binocular microscope.—*Schweiz. Wchnschr. Chem. u. Pharm.* 1911, v. 49, pp. 75-78.

Scheringa, K., discusses the use of a simplified Nicol prism, in connection with microscopical examinations by means of polarized light.—*Pharm. Weekblad*, 1911, v. 48, pp. 160-161.

Fischer, Emil, describes and illustrates his method of micropolarization.—*Ber. deutsch. chem. Gesellsch.* 1911, v. 44, pp. 129-132.

Amann, J., reports observations on an ultramicroscope examination of colloidal substances.—Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, pp. 137–139.

2. VALUATION OF VEGETABLE DRUGS.

Linke, H., expresses the belief that the Pharmacopœial Commission should endeavor to establish standards for extract content and limitations for ash and moisture of drugs for which no such limitations are at present available.—Ber. pharm. Gesellsch. 1911, v. 21, p. 208.

Caesar & Loretz (Jahres-Bericht, 1911, p. 7) point out that, for the valuation of vegetable drugs, the moisture content, the extract content, the ash content, and the resin content of drugs or gum resins containing it are important factors. See also pp. 100–101, 116–117.

Anselmino, Otto, thinks it impractical at the present time to include extract requirements for drugs in the Pharmacopœia.—Ber. pharm. Gesellsch. 1911, v. 21, p. 200.

Noyes, C. R., makes a plea for a fixed rather than a minimum standard for alkaloidal drugs.—Proc. Minnesota Pharm. Assoc. 1911, pp. 74–77.

Wilbert, M. I., in a review of the supplement to the Ph. Ndl. IV, points out that this Pharmacopœia in place of making definite fixed requirements for the alkaloid content of drugs and pharmaceutical preparations, now permits of a range of standards or a variation of approximately 20 per cent from the original requirements.—Am. J. Pharm. 1911, v. 83, p. 87.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 83–146) present the following summaries of the requirements for active constituents in drugs embodied in the several pharmacopœias:

Name of drug.	Austr. VIII	Belg. III	Brit. IV	Dan. VII	Germa. V	Helv. IV	Hung. III	Jap. III	Ndl. IV	Svec. IX	U. S. P. VIII	Active constituent, per cent of—
Aconitum.....	.....	0.8	.....	.....	.....	0.8	.....	0.64	.....	.....	0.5	Aconitine (?).
Areca.....	.....	.....	.....	.....	.....	0.5	.....	.....	.....	.....	.....	Arecoline.
Belladonna folia.....	.....	.....	.....	.....	0.3	0.35	.....	.....	Qual.	Qual.	0.3	Hyoscyamine (?).
Belladonna radix.....	.....	.....	.....	.....	.....	0.4	.....	.....	.....	.....	0.3	Mydriatic alkaloids.
Cantharides.....	.....	0.6	.....	.....	0.3	0.8	.....	.....	0.6-0.8	.....	.....	Cantharidin.
Cinchona.....	6.0	5.0	3-6	4.0	6.5	6.5	6.0	5.07	6.0	6.6	5.0	Cinchona alkaloids.
Coca.....	.....	.....	.....	.....	.....	0.7	.....	.....	.....	.....	0.5	Cocaine.
Colchici semen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.55	Colchicine.
Granatum.....	.....	.....	.....	.....	0.4	0.5	.....	0.413	0.25	.....	.....	Total alkaloids.
Hydrastis.....	.....	.....	.....	.....	2.2	2.0	.....	.....	.....	.....	2.5	Hydrastine.
Fluidextractum.....	.....	.....	.....	.....	2.2	2.0	2.0	2.0	2.0	.....	2.0	Hydrastine.
Hyoscyamus.....	.....	.....	.....	.....	0.07	.....	.....	.....	.....	.....	0.08	Mydriatic alkaloids.
Ipecacuanha.....	2.0	2.0	.....	.....	1.99	2.0	2.0	1.93	2.0	1.88	2.0	Total alkaloids.
Jalapa.....	10.0	9.0	9-11	7.0	10.0	10.0	8.0	.....	8.0	7.0	7.0	Resin.
Nucis vomica.....	2.5	.....	.....	2.5	2.5	2.5	2.5	2.5	2.5	2.5	.....	Total alkaloids.
Do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.25	Strychnine.
Opium.....	10.0	10.0	10.0	10.0	10.0	10.0	9.5-10	10-11	10.0	10.0	12-12.5	Morphine.
Pilocarpus.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.5	Pilocarpine.
Sabadilla.....	.....	.....	.....	.....	.....	3.5	.....	.....	.....	.....	.....	Total alkaloids.
Sinapis.....	.....	.....	.....	.....	0.7	0.8	.....	0.55	0.7	.....	.....	Volatile oil.
Sterculia.....	1.5	.....	.....	.....	.....	1.5	.....	.....	.....	.....	.....	Caffeine (?).
Stramonium.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.25	Mydriatic alkaloids.

Keegan, P. Q., contributes a few brief notes on plant chemistry.—*Chem. News*, 1911, v. 104, p. 109.

Lilly, J. K., points out that more and more concerns handling drugs or manufacturing medicines therefrom are developing departments for the testing and analysis of drugs in which they deal or may use.—*Proc. N. W. D. A.* 1911, p. 157.

The City of Washington Branch of the A. Ph. A. calls attention to the difficulty of providing satisfactory standards for many of the little used botanical drugs, particularly American botanicals, as these articles usually vary in origin and are generally contaminated with admixtures of various kinds.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 89.

Hurley, Walter Eugene, expresses the belief that the loss of confidence and the resulting indifference toward drug therapy has been brought about by the clinical failures seen every day by the average physician. He further asserts that the extent of variance from the requirements of the U. S. P. has been shown to be so great as to leave no doubt as to the unreliability of drugs dispensed in the routine way.—*Am. Medicine*, 1911, v. 17, pp. 541–543.

3. ASH DETERMINATION.

True, Rodney H., notes that the Ph. Germ. V has included definite limitations for the permissible ash content in connection with many of the more important drugs.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 184.

Beringer, George M., thinks a commendable feature of the Ph. Germ. V is the statement of ash content of drugs which is generally given.—*Proc. New Jersey Pharm. Assoc.* 1911, p. 78. Also *Am. J. Pharm.* 1911, v. 83, p. 330.

Heyl, Georg, discusses the determination of the ash content as outlined in the Ph. Germ. V, and presents tables showing the limitations for ash of drugs and of other preparations.—*Apoth.-Ztg.* 1911, v. 26, pp. 454–455.

Fleissig, in a review of the Ph. Germ V, states that the methods for determining residue on incineration are quite satisfactory.—*Schweiz. Wehnschr. Chem. u. Pharm.* 1911, v. 49, p. 317.

An unsigned review (*Chem. & Drug.* 1911, v. 78, p. 351) notes that in the Ph. Germ. V an ash limit is prescribed in 47 instances. See also *Pharm. J.* 1911, v. 86, p. 496.

Caesar & Loretz (*Jahres-Bericht*, 1911, pp. 145–146) discuss the Ph. Germ. V. method for determining the ash content of drugs, and point out that the lixiviation prescribed can be effectually substituted by other means. They recommend the use of thoroughly washed sand to separate the various particles of the drug.

Fleurent and Lévi describe a method for the exact determination of ash in the analysis of vegetable and animal matters, which they assert will eliminate many errors.—*Compt. rend. Acad. sc.* 1911, v. 152, pp. 715-718. Also *J. Pharm. et Chim.* 1911, v. 3, p. 595.

The Paris Pharmaceutical Society adopts a number of ash or residue limits and suggests that the term "appreciable residue" be defined in the preface to the Codex.—*J. Pharm. et Chim.* 1911, v. 4, p. 434.

An editorial (*Am. Druggist*, 1911, v. 59, p. 172) notes that ash standards are proposed for a number of vegetable drugs of the Ph. Brit.

Wilbert, M. I., discusses the desirability of including limitations for ash content of drugs, and presents a table showing the maximum ash content of some well-known drugs included in 10 of the recently published pharmacopœias.—*Am. J. Pharm.* 1911, v. 83, pp. 474-478. See also Merck's Rep. 1911, v. 20, pp. 335-336.

Table showing the maximum ash content of some well known drugs included in 10 of the recently published pharmacopœias.

Title of drug.	Ph. Germ. V.	Ph. Hung. III.	Ph. Ital. III.	Ph. Fr. V.	Ph. Svec. IX.	Ph. Helv. IV.	Ph. Aust. VIII.	Ph. Belg. III.	Ph. Ndl. IV.	U. S. P. VIII.
Acacia.....	5.0	5.0	4.0	.....	5.0	4.0	3.0	5.0	4.0	4.0
Adeps lane.....	0.1	0.05	.....	.....	.....	.....	.....	0.05	0.10	0.30
Aloe.....	1.5	.....	2.0	1.5	.....	1.0	1.0	.....	1.5	.....
Althœa.....	.....	.....	.....	.....	.....	6.0	6.0	7.5	7.0	.....
Amylum.....	1.0	0.5	1.0	1.0	.....	0.5	0.5	1.0	1.0	.....
Anisum.....	10.0	.....	.....	.....	.....	10.0	10.0	12.0	.....	.....
Asafœtida.....	15.0	.....	10.0	10.0	10.0	20.0	10.0	10.0	10.0	15.0
Belladonnæ folia.....	15.0	.....	.....	.....	.....	15.0	15.0	.....	.....	.....
Benzoinum.....	2.0	.....	2.0	2.0	.....	1.5	2.0	.....	2.0	2.0
Calumba.....	.....	.....	.....	.....	.....	8.0	6.0	.....	.....	.....
Cantharis.....	8.0	.....	7.0	.....	.....	8.0	8.0	.....	9.0	8.0
Capsicum.....	6.5	5.0	.....	.....	.....	6.5	6.5	.....	.....	.....
Carpo ligni.....	5.0	.....	2.0	.....	.....	2.0	.....	.....	2.0	.....
Cardamomum.....	.....	.....	.....	.....	.....	10.0	8.0	.....	8.0	4.0
Carum.....	8.0	.....	.....	.....	.....	8.0	7.0	.....	.....	8.0
Caryophyllus.....	8.0	.....	.....	.....	.....	7.0	8.0	.....	6.0	8.0
Cinchona.....	.....	.....	6.0	.....	.....	6.0	6.0	.....	8.0	.....
Cinnamomum seylanicum.....	5.0	.....	.....	.....	.....	5.0	5.0	7.0	8.0	4.0
Coccus.....	.....	.....	.....	.....	.....	6.0	.....	.....	.....	6.0
Cubeba.....	8.0	.....	9.0	.....	.....	8.0	9.0	.....	10.0	.....
Digitalis.....	.....	.....	.....	.....	.....	10.0	10.0	12.0	.....	.....
Ergota.....	.....	.....	5.0	.....	.....	5.0	5.0	.....	5.0	.....
Fœniculum.....	10.0	.....	.....	.....	.....	10.0	10.0	12.0	.....	.....
Gelatina.....	2.0	.....	2.0	2.0	.....	2.0	2.0	2.0	3.0	.....
Gentiana.....	.....	.....	.....	.....	.....	6.0	5.0	7.0	6.0	.....
Glycyrrhiza.....	.....	.....	.....	.....	.....	6.0	6.0	7.5	6.0	.....
Gossypium purificatum.....	0.3	.....	0.3	0.4	.....	0.5	0.5	0.3	0.3	0.3
Granatum.....	.....	.....	.....	.....	.....	15.5	10.0	.....	15.0	.....
Hydrastis.....	.....	.....	6.0	.....	.....	6.0	6.0	.....	6.0	.....
Hyoscyamus.....	24.0	.....	.....	.....	.....	.....	.....	.....	.....	.....

Table showing the maximum ash content of some well known drugs included in 10 of the recently published pharmacopœias—Continued.

Title of drug.	Ph. Germ. V.	Ph. Hung. III.	Ph. Ital. III.	Ph. Fr. V.	Ph. Svec. IX.	Ph. Helv. IV.	Ph. Aust. VIII.	Ph. Belg. III.	Ph. Ndl. IV.	U. S. P. VIII.
Ipecacuanha.....			4.0			4.0	5.0		6.0	
Jalapa.....	6.5		4.5			6.5	5.0			
Linum.....	5.0		6.0			5.0	5.0			
Lupulinum.....			10.0			10.0	10.0			10.0
Lycopodium.....	3.0		4.0		2.5	3.0	3.0	5.0	5.0	5.0
Manna.....	3.0		3.5		4.0	3.0	4.0			
Mel.....	0.8		0.4		0.5	0.8	0.4	0.5		0.3
Myrrha.....	7.0		6.0		6.0	6.0	6.0	6.0	5.0	
Nux vomica.....	3.0					3.5	3.0			
Opium.....			6.0			6.0	6.0		8.0	
Rhamnus purshiana.....	6.0								10.0	
Rheum.....	12.0		12.0			13.0	12.0		12.00	
Saccharum.....	0.1			0.075					0.1	
Saccharum lactis.....	0.25					0.2			0.1	0.25
Scilla.....	5.0					5.0	8.0			
Senna.....	12.0					12.0	10.0	12.0	8.0	
Styracis.....			5.0			5.0	5.0	5.00	8.0	
Stramonium.....	20.0									
Valeriana.....						12.0	10.0	15.0		
Zingiber.....	7.0					7.0	5.0		8.0	

—Am. J. Pharm., 1911, v. 83, p. 477.

Umney, John C., commenting on the above, thinks that Wilbert's deductions from the records he quotes are hardly justified. Umney believes that roots, barks, and even leaves, are capable of control by ash content, and the matter of sampling offers no insurmountable difficulties in connection with drugs of high standard to be used as medicine.—Brit. & Col. Drug. 1911, v. 60, pp. 342-343. See also editorial, p. 339.

Thurston and Thurston present a tabulated statement of their estimations of the ash contained in a number of powdered vegetable drugs.—Midl. Drug. 1911, v. 45, p. 438.

Schneider, Albert, calls attention to and reproduces the table of ash yielded by drugs examined by LaWall and Bradshaw.—Merck's Rep. 1911, v. 20, pp. 91-93.

Umney and Bennett report a number of ash determinations for commercial spices, most of which were more or less adulterated.—Drug Topics, 1911, v. 26, p. 148.

Tankard, Arnold Rowsby, thinks it eminently desirable that all powdered drugs and some other substances (gums, etc.) be required to conform to a limit for mineral matters.—Pharm. J. 1911, v. 87, p. 73.

"D. B." presents the results of a conference with W. Miltacher as to the inspection of pharmacies in Austria and notes the attention

given to ash determinations.—Bull. sc. pharmacol. 1911, v. 18, Annexes, p. 8.

Allen and Brewis present a note on the moisture and ash contents of medicinal extracts.—Brit. & Col. Drug. 1911, v. 60, p. 85. Also Year-Book of Pharmacy, 1911, pp. 417–419.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 5) report figures for the ash yield of powdered drugs and call attention to the desirability of avoiding the fixing of arbitrary standards for crude drugs which are either unobtainable commercially or else can be secured only at a disproportionate cost.

4. GLUCOSIDES.

Reichard, C., in a contribution to our knowledge of the reactions of glucosides, reviews the reactions of convallamarin and convallarin.—Pharm. Zentralh. 1911, v. 52, pp. 183–188.

Kobert, Rudolf, discusses saponins: their properties, composition, and uses.—Pharm. J. 1911, v. 86, pp. 244–245, 293–294.

Bennet, A. A., in a contribution on the chemistry of alkaloids, discusses the nature of the glucosides and of gluco-alkaloids.—Am. J. Clin. Med. 1911, v. 18, p. 502.

Fichtenholz discusses the detection of arbutin in vegetable drugs, and presents an interesting contribution on the influence of certain bodies on the hydrolysis of the glucosides by emulsin.—J. Pharm. et Chim. 1911, v. 3, p. 214.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, April, p. 148) call attention to several recent papers on the chemistry of glucosides.

Chestnut, V. K., is reported as stating that glucosidal drugs deteriorate because of the action of enzymes, which, in the presence of light and moisture, have a tendency to decompose the glucosides.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 89.

Flemer, Lewis, comments on the preservation of glucosidal drugs by the use of calcined lime.—Bull. Pharm. 1911, v. 25, p. 261.

Hilton, S. L., refers to the difficulties encountered in attempting to provide assay methods for drugs containing glucosides and the readiness with which drugs of this kind deteriorate.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 89.

Fischer and Helferich report on a number of synthetic glucosides prepared by them.—Ann. Chem. 1911, v. 383, pp. 68–91.

Lüders, Richard, reviews the progress made in our knowledge of the chemistry of alkaloids and of glucosides.—Chem. Ind. 1911, v. 34, pp. 243–248.

Weevers, T. (Proc. K. Akad. v. Wetensch, sect. sc., 1909–1910, v. 12, pp. 193–201) calls attention to the physiological significance of certain glucosides.—Index Medicus, 1911, v. 9, p. 203.

5. ALKALOIDS.

Bolland, A., reports observations on the microchemical behavior of 34 alkaloids not previously reported on. The article is illustrated.—*Monatsh. Chem.* 1911, v. 32, pp. 117–133.

Souèges, René, contributes a note on the employment of gaseous reagents for the recognition of the active principles in drugs.—*Bull. sc. pharmacol.* 1911, v. 18, pp. 526–529.

Reichard, C., in a contribution to our knowledge of the alkaloid reactions, discusses the reactions for arecolin, arecaine, and hydrastinine.—*Pharm. Zentralh.* 1911, v. 52, pp. 711–716, 1253–1260.

Gadamer, J., reports a further study of the corydalis alkaloids.—*Arch. Pharm.* 1911, v. 249, pp. 30–39, 224–233, 498–510, 641–701. See also pp. 598–640.

Faltis, Franz, reviews the nature of the alkaloids formed in the papaveraceæ and related plant families.—*Pharm. Post*, 1911, v. 44, pp. 535–538.

Skita and Franck present a preliminary contribution on the hydration of alkaloids.—*Ber. deutsch. chem. Gesellsch.* 1911, v. 44, pp. 2862–2867.

Einbeck, Hans, presents a review of the progress in our knowledge of the chemistry of the alkaloids during the years 1909–1910.—*Fortschr. Chem.* 1910–1911, v. 3, pp. 283–294. See also Hübner, Otto, *Chem. Ztg.* 1911, v. 35, pp. 1369–1370, 1395–1397; and Lüders, Richard, *Chem. Ind.* 1911, v. 34, pp. 243–248.

Kiczka, M., reviews the present status of the chemistry of the alkaloids.—*Pharm. Prax.* 1911, v. 10, pp. 193–205, 248–265, 300–312.

Eder, Rob., reports some observations on the microsublimation of alkaloids in a partial vacuum.—*Pharm. Post*, 1911, v. 44, pp. 880–881. Also *Ztschr. allg. österr. Apoth.-Ver.* 1911, v. 49, pp. 455–456.

Bennett, A. A., in a contribution on the chemistry of alkaloids, comments on their composition and properties, classification and structure, and their physiological action.—*Am. J. Clin. Med.* 1911, v. 18, pp. 498–504.

Birmann, James, discusses the annual variation in the active principles in a number of medicinal plants. He presents a chart illustrating graphically the variation in the active principle of certain drugs during the years 1907, 1908, 1909, and 1910.—*Schweiz. Wehnschr. Chem. u. Pharm.* 1911, v. 49, pp. 6–7.

Rusby, H. H., criticizes the method of reducing alkaloidal percentages by permitting the presence in powdered drugs of limited amounts of certain foreign substances.—*Pharm. Era*, 1911, v. 44, p. 141.

Solis-Cohen, Solomon, in discussing the scope of the Pharmacopœia, expresses the belief that active principles should not displace

the crude drug or galenical preparations, unless physicians in general all agree that the active principle is the only necessary or desirable preparation.—Critic and Guide, 1911, v. 14, p. 31.

French, J. M., discusses the minor peculiarities of alkaloidal medication and the alkaloidal materia medica.—J. Therap. & Diet. 1911, v. 5, pp. 111–114, 142–145.

Additional references on the chemistry and pharmacology of alkaloids will be found in Index Med.; J. Am. M. Assoc.; Chem. Abstr.; and Zentralbl. Biochem. u. Biophysik.

6. ASSAY PROCESSES.

Dohme and Engelhardt review the assay process of the U. S. P. and make a number of suggestions in connection therewith.—Am. J. Pharm. 1911, v. 83, pp. 517–525. See also Pharm. Era, 1911, v. 44, p. 544.

The A. Ph. A. Committee on Drug Market points out that cooperative work on the assay of crude drugs and galenical preparations shows that considerable variation is to be expected in the results of different analyses, and notes the importance of not adopting assay processes in the new Pharmacopœia, unless they have been thoroughly tried out and proved to give uniform results in the hands of different workers.—Drug Topics, 1911, v. 26, p. 276.

Beringer, George M., in a review of the Ph. Germ. V, states that assay processes are generally extended and improved, and new ones are added for a great many articles.—Am. J. Pharm. 1911, v. 83, p. 330. Also Proc. New Jersey Pharm. Assoc. 1911, p. 78.

True, Rodney H., points out that the Ph. Germ. V has included assay processes and chemical tests for active constituents rather liberally.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 184.

Heyl, Georg, discusses the Ph. Germ. V assay methods and presents a compilation of the requirements in the form of a table.—Apoth.-Ztg. 1911, v. 26, pp. 474–476.

Gaze, R., reports his experiences with the volumetric assays of the Ph. Germ. V.—*Ibid.*, p. 301. See also Pharm. J. 1911, v. 86, pp. 93–94, 205–206, 295–296; Chem. & Drug. 1911, v. 78, p. 351; and Am. Druggist, 1911, v. 58, p. 137.

Caesar & Loretz (Jahres-Bericht, 1911, p. 7), in a general review of current contributions to alkaloidal estimation, call attention to a brochure by Otto Frey, who recommends the universal adoption of titration methods.

Linke, H., regrets that the Ph. Germ. V confines itself largely to titrimetric processes of assay. He thinks gravimetric methods would have been generally more practical, so far as the retail dealer is concerned.—Ber. pharm. Gesellsch. 1911, v. 21, p. 175. See also p. 208.

Herzog, J., thinks that many of the drugs contain such comparatively small quantities of alkaloids that it would be impracticable to use a gravimetric method of assay.—*Ibid.*, p. 201.

Kimberly, C. H., presents the preliminary report of the committee on alkaloidal assays of the Philadelphia Branch of the A. Ph. A.—Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 159–164.

Pearson, W. A., calls attention to a number of points in the technique of pharmacopœcial assays, regarding which differences of opinion may exist.—Am. J. Pharm. 1911, v. 83, pp. 425–427.

Stevens, A. B., states that in alkaloidal titrations the standard solutions should be checked against morphine. Morphine makes a very good standard, as it is easily obtained pure, and by drying to constant weight becomes anhydrous.—Pacific Pharm. 1911, v. 5, p. 87.

Ferguson, George A., expresses the opinion that it is unfortunate that so many of the assay processes of the present U. S. P. are open to criticism, and that concordant results can only be obtained by long experience in this particular field of work.—Proc. New York Pharm. Assoc. 1911, p. 153.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 83–146) discuss the valuation and assay of a number of drugs and present a description of the apparatus necessary to carry out the several tests.

Kahn, Joseph, reports the opinion that a definite standard for assays be given, if practicable, for each important drug and preparation.—Proc. New York Pharm. Assoc. 1911, p. 84.

Lilly, J. K., points out that a standard method for preparing samples is being discussed by analysts, and it is to be hoped that an effective method may become official or at least possess the approval of some authority.—Proc. N. W. D. A. 1911, p. 159.

Vanderkleed, Chas. E., presents the following summary of drug assays made by him during the years 1909–1911, inclusive:

Year.	Total.	Above.	Below.	Per cent above.
1909 report.....	395	313	82	79.3
1910 report.....	340	291	49	85.6
1911 report.....	263	224	39	85.1

—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

LaWall, Charles H., outlines a new method for the assay of alkaloidal fluid extracts, in which he uses sodium chloride to remove fat, resins, chlorophyll, and other substances that are commonly extracted with immiscible solvents, such as chloroform and ether.—Am. Druggist, 1911, v. 59, pp. 145–146.

Stevens and Schlichting discuss the standardization of solutions for alkaloidal assay.—Am. Druggist, 1911, v. 59, pp. 259–260. See

also *Pharm. Era*, 1911, v. 44, p. 388; and *Pract. Drug.* 1911, v. 29, October, p. 36.

Brown, Linwood A., emphasizes the need of great care in purchasing supplies and making official preparations, and urges pharmacists to assay the finished product when it permits of assay.—*Proc. Kentucky Pharm. Assoc.* 1911, p. 90.

7. PHYSIOLOGICAL STANDARDIZATION.

The report of the committee on physiological assay of the Philadelphia Branch of the A. Ph. A. recommends that tests for the following drugs be developed: Apocynum, convallaria, digitalis, squill, strophanthus, aconite, gelsemium, lobelia, veratrum, cannabis, ergot, pepsin, suprarenals, thyroid, chenopodium, granatum, kousso, santonica, cimicifuga, gossypii cortex, and phytolacca. Cimicifuga, gossypii cortex, and phytolacca seem of too little importance to require physiological standardization.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, pp. 22-27. Also *J. Am. M. Assoc.* 1911, v. 56, pp. 606-607.

Joanin urges the use of the term "biologic" instead of physiologic, in this connection. He discusses general rules under which the method should be pursued, and adds that, while perhaps less exact in figures than chemical assay, it certainly has a greater value from a therapeutic standpoint.—*J. Pharm. et Chim.* 1911, v. 3, p. 363.

Houghton, E. Mark, discusses the principles and practice followed in testing the physiological activity of drugs. He also outlines standards for a number of important drugs and their preparations.—*Am. Druggist*, 1911, v. 59, pp. 39-40, 144-145. Also *Bull. Am. Pharm. Assoc.* 1911, v. 6, pp. 176-181; and *Pract. Drug.* 1911, v. 29, May, p. 39.

Hale, Worth, discusses the biological standardization of drugs and calls attention to some of the different methods recommended or used.—*Am. J. Pharm.* 1911, v. 83, pp. 97-111.

Caesar & Loretz (*Jahres-Bericht*, 1911, p. 9) express regret that the Ph. Germ. V did not include methods for the physiologic valuation of drugs like digitalis and strophanthus.

An editorial (*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 7) states that as a qualitative method of drug testing, physiological experimentation is of the greatest value; as a quantitative method it is not wholly satisfactory. See also pp. 155-158.

Vanderkleed, Charles E., discusses chemical and physiological standardization.—*Pract. Drug.* 1911, v. 29, March, p. 29, and April, p. 34. Also *Pharm. Era*, 1911, v. 44, pp. 57-59.

An editorial (*Am. Druggist*, 1911, v. 58, pp. 173-174) discusses the practicability of biological standardization by pharmacists.

Hatcher, Robert A., defines a cat unit standard for heart tonics as the amount of crystalline ouabain (crystalline strophanthin) which is

fatal in about ninety minutes to a kilogramme of cat, when the drug is injected slowly and almost continuously into the femoral vein. This is almost exactly a tenth of a milligramme of crystalline ouabain or one ten-millionth of the weight of the animal.—*Ibid.*, p. 178.

Hale, Worth, discusses the physiological standardization of digitalis and its preparations, and points out that considerable variation exists both in the strength of the crude drug as well as of the preparations made from it.—Bull. No. 74, Hyg. Lab. U. S. P. H. & M. H. S. 1911, pp. 55.

Edmunds and Hale, in a report on the physiological standardization of ergot, point out that the chemical methods of assay show little relation to the biological methods. They review the several methods that have been recommended, and conclude that for practical purposes the cock's-comb method is to be preferred. Because of the marked variation in the strength of preparations of ergot, they recommend that the date of manufacture be marked on the container.—Bull. No. 76, Hyg. Lab. U. S. P. H. & M. H. S. 1911, pp. 58.

Hunt and Taveau report observations on the effects of a number of derivatives of choline and analogous compounds on the blood pressure.—Bull. No. 73, Hyg. Lab. U. S. P. H. & M. H. S. 1911, pp. 136.

Klotz, Rudolf, reports experimental studies on the blood pressure raising action of pituitrin (hypophysis extract).—Arch. exper. Path. u. Pharmakol. 1911, v. 65, pp. 348–360.

Pincussohn, Ludwig, presents a review of the progress of physiological chemistry during 1910.—Fortschr. Chem. 1910–1911, v. 3, pp. 361–376.

An editorial (N. York M. J. 1911, v. 94, p. 1137) points out that gravely erroneous conclusions may be drawn from experiments with drugs on the lower animals.

Haskell, Charles C., discusses physiological drug testing and states that it is not maintained by those who advocate the physiological standardization of drugs that the suitable therapeutic dose of a preparation can be determined by animal experimentation. It is maintained, however, that by this means preparations of nearly constant strength can be secured.—*Ibid.*, p. 1254.

Catillon opposes the dictum of Chevalier, that the fixation of toxicity is without value, and contends as a result of a large number of experiments that the precise toxic dose for a given weight of the animal in a specified time furnishes a scientific indication of the degree of activity of the products because it accords with chemical analysis.—J. Pharm. et Chim. 1911, v. 3, p. 317. See also p. 268.

Scudder, commenting on Hare's warning against too much study of the toxic effects of drugs on lower animals, says it is time for some of the asinine members of the Council of Pharmacy of the A. M. A.

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to cease braying and sit up and take notice. He adds: We do not object to the study of the physiological effects of drugs as a means to an end, the determining of *medicinal action in small doses*.—Eclectic M. J. 1911, v. 71, p. 362.

7. PHARMACEUTICAL PREPARATIONS.

Utech, P. Henry, makes a number of suggestions for improving some of the widely used pharmaceutical preparations.—Drug Topics, 1911, v. 26, pp. 278-279.

Nish, F. W., enumerates the apparatus necessary for the pharmaceutical laboratory.—Pacific Pharm. 1911, v. 5, pp. 202-204.

An editorial (Drug. Circ. 1911, v. 55, pp. 619-620) comments on the working tools of the craft and emphasizes the need for having satisfactory apparatus.

Grosh, Daniel M., calls attention to some modern pharmaceutical machinery and mechanical aids.—Merck's Rep. 1911, v. 20, pp. 333-334.

Havenhill, L. D., asserts that four things are essential to the production of satisfactory medicines. First, accurate weights and measures; second, standard crude material; third, time tried formulas whose limitations are known; and fourth, sufficient care and skill on the part of the compounder.—Proc. Kansas Pharm. Assoc. 1911, p. 111.

Cook, Alfred N., states that no amount of care can make a good product from poor drugs and chemicals, yet preparations made from the best material may easily be spoiled by slovenly and careless methods in measuring and weighing.—Bull. South Dakota Food & Drug Dept. 1911, No. 23, p. 2.

Arny, H. V., in commenting on the report of the committee on adulterations and sophistications of the Ohio State Pharmaceutical Association, states that the report indicates that there is still carelessness shown in the manufacture of tincture of iodine, Fowler's solution, and syrup of ferrous iodide.—Proc. Ohio Pharm. Assoc. 1911, p. 127.

An unsigned article (Pharm. J. 1911, v. 87, p. 302) dealing with the science and art of dispensing, gives some practical points in the preparation of various mixtures, the order of mixing, and incompatibility.

Tassilly, E., discusses the employment of cold in the manufacture of pharmaceutical preparations.—Bull. sc. pharmacol. 1911, v. 18, pp. 30-34.

"H. in O." discusses the nature of the sieves required by the Ph. Germ. V, and points out that the present requirements provide for the size of the mesh irrespective of the number of meshes in any given space.—Pharm. Ztg. 1911, v. 56, p. 97.

Beringer, George M., comments on the nature of the sieves directed by the Ph. Germ. V.—Proc. New Jersey Pharm. Assoc. 1911, p. 77.

An unsigned article (Am. Druggist, 1911, v. 58, pp. 137-139) reviews some of the galenicals of the Ph. Germ. V.

Campbell, Andrew, presents a number of suggestions for the keeping of formulas and miscellaneous information, to be used in connection with the pharmacist's manufacturing department.—Proc. Pennsylvania Pharm. Assoc. 1911, pp. 287-290.

1. GENERAL FORMULAS.

Kahn, Joseph, reports the opinion that space could be economized in the Pharmacopœia if general processes for the preparation of galenicals be given.—Proc. New York Pharm. Assoc. 1911, p. 84.

Raubenheimer, Otto, thinks that general formulas are very necessary in the Pharmacopœia because they will save a good deal of space.—*Ibid.* p. 94.

Beringer, Geo. M., notes that in the Ph. Germ. V the galenical preparations are classified into numerous distinct classes and each class is headed by a short descriptive paragraph setting forth such general instructions as are appropriate.—Am. J. Pharm. 1911, v. 83, p. 332.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 708) calls attention to some of the changes in the composition and the method of making the more important galenical preparations.

Schneider, A., points out that under the general heading "Bacilli" the Ph. Germ. V now groups "Anthrophore," "Cereoli," and "Styli caustici," which occurred as separate headings in the Ph. Germ. IV.—Pharm. Zentralh. 1911, v. 52, p. 565.

Beringer, George M., points out that, as in the previous revisions, the Ph. Germ. V follows the custom of stating formulas, when not dosage forms, in parts by weight, even in the formulas for fluid extracts.—Am. J. Pharm. 1911, v. 83, p. 326.

FORMS OF MEDICAMENTS.

Dunn, W. R., in a paper on home made chemicals, outlines methods of preparing granular effervescent preparations and scale preparations.—Brit. & Col. Drug. 1911, v. 60, p. 57.

Sawyer, James, presents a note on a new form of trochiscus, Cremules (cremulæ), with chocolate cream as a base.—Lancet, 1911, v. 181, p. 435. Also Chem. & Drug. 1911, v. 79, p. 323; and Pharm. J. 1911, v. 87, p. 270.

Malenfant, R., presents an analysis of a sample of pastilles of gum arabic and the study of a new adulteration. The pastilles contain glucose, sugars, gelatin, tapioca, a small quantity of calcium sulphate, and but a slight trace of gum arabic.—J. Pharm. et Chim. 1911, v. 3, pp. 484-489.

The *Pharmaceutical Journal* (1911, v. 87, pp. 529, 562) discusses the science and art of dispensing suppositories.

Brown, Haydn, describes and illustrates a new form of suppository.—*Brit. M. J.* 1911, v. 1, p. 90.

An unsigned article (*Apoth.-Ztg.* 1911, v. 26, pp. 962–963) describes and illustrates an apparatus for making suppositories by cold compression.

2. CHANGES IN STRENGTH.

An unsigned review of the *Ph. Germ. V* (*Pharm. J.* 1911, v. 86, p. 708) notes that the changes in the composition or method of preparation of the galenicals are fewer and less important than some of the other changes which have been referred to, but they are not without interest. There are more alterations and additions among the extracts and fluid extracts than in any other class.

Sanford, J. A., thinks that more attention must be given to the quality and condition of the stock in the pharmacy, and the apothecary must get better facilities for testing and examining his goods; his business position morally demands it and the laws compel it.—*Pacific Pharm.* 1911, v. 5, p. 281.

Kahn, Joseph, reports the opinion that more attention should be paid to the preservation and the mode of keeping drugs and preparations.—*Proc. New York Pharm. Assoc.* 1911, p. 85.

Raubenheimer, Otto, states that explicit directions are given in the *Ph. Germ. V* for the storage and preservation of drugs and their preparations, as well as a list of those to be kept under certain conditions and renewed annually.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 217.

Lami, Pio, discusses the decomposition of active substances in medicaments by enzyme action.—*Boll. chim. farm.* 1911, v. 50, pp. 835–842.

Scoville, Wilbur L., discusses the results of an investigation extending over three years, undertaken to show the stability of tannin containing fluid extracts and tinctures; the necessity of strongly alcoholic menstrua for such preparations is clearly indicated.—*Bull. Pharm.* 1911, v. 25, pp. 428–430.

3. STANDARDIZATION.

Brown, Linwood A., thinks it poor business sense for a pharmacist to sink a thousand or fifteen hundred dollars in a soda fountain, which will yield a medium profit with a maximum amount of work for a few months, and then seriously to object to investing a few hundred dollars in equipping a laboratory which will yield a goodly monetary profit all the year around and increased confidence on the part of his patrons.—*Proc. Kentucky Pharm. Assoc.* 1911, p. 93.

Rusby, H. H., asserts that he found one large manufacturing house labeling its galenical preparations as containing the standard percentage of constituents, yet never assaying them to ascertain the actual character of the articles before affixing the label.—*Proc. Vermont Pharm. Assoc.* 1911, p. 84.

Herb, Joseph, asserts that it would be well for the druggist to remember that a label "For technical use" on a package of drugs received means in almost every case gross adulteration, and it might just as well read, "The contents of this package are not fit for dispensing."—*Pharm. Era*, 1911, v. 44, p. 481.

Noyes, C. R., notes that the U. S. P. always requires a higher percentage of alkaloid in the drug than in the preparations made from it. The amount present in the tincture is generally required to be higher than in the fluid extract.—*Proc. Minnesota Pharm. Assoc.* 1911, p. 77.

Southall Bros. & Barclay (*Rep.* 1911, Birmingham, 1912, pp. 45-51) present a table showing suggested standards, ranges of specific gravity, etc., for galenical preparations.

4. REQUIREMENTS.

Kahn, Joseph, reports the opinion that short descriptions of color, odor, reaction, etc., be included in the U. S. P. for galenical preparations.—*Proc. New York Pharm. Assoc.* 1911, p. 85.

Beringer, George M., points out that in the *Ph. Germ. V* each formula is accompanied by a description of the product, and not infrequently this gives, in addition to the color, consistence, taste, etc., also the specific gravity and the percentage of extractive and ash and any distinctive characteristic reaction or test.—*Proc. New Jersey Pharm. Assoc.* 1911, p. 82. Also *Am. J. Pharm.* 1911, v. 83, p. 334.

A review of the *Ph. Germ. V* (*Pharm. J.* 1911, v. 86, p. 496) states that the changes made give greater precision to the requirements, and define within more clearly specified limits what qualities are suitable for use and what must be rejected.

A book review of the *Ph. Germ. V* (*Lancet*, 1911, v. 180, p. 119) concludes that it only remains to be seen to what extent the stringent scientific and practical requirements of the German volume are compatible with actual conditions.

Southall Bros. & Barclay (*Rep.* 1911, Birmingham, 1912, p. 40) call attention to the desirability of fixing efficient and practicable standards for galenical preparations.

Mindes, J., reports a number of characteristic reactions for chemical substances and pharmaceutical preparations.—*Pharm. Post*, 1911, v. 44, pp. 911-913.

Roerdanse, W., discusses the control of pharmaceutical preparations and the desirability of having proprietary preparations examined at a central bureau.—*Pharm. Ztg.* 1911, v. 56, pp. 885-887.

5. GALENICALS.

Roderfeld, R., reviews the pharmaceutical preparations of the Ph. Germ. V.—*Apoth.-Ztg.* 1911, v. 26, pp. 261 ff.

An unsigned article (*Pharm. Ztg.* 1911, v. 56, pp. 292 ff.) reviews the galenical preparations of the Ph. Germ. V.

See also *Pharm. J.* 1911, v. 86, p. 708, and *Am. Druggist*, 1911, v. 58, p. 137.

Ames, Fred W., jr., presents a number of reasons why galenical preparations should be prepared by the retail pharmacist.—*Merck's Rep.* 1911, v. 20, pp. 123–124.

Hunt, Reid, reports that the Tenth International Congress of Pharmacy, Brussels, September 1–6, 1910, recommended that pharmacists make their own galenical preparations so far as possible.—*Am. J. Pharm.* 1911, v. 83, p. 25.

Whorton, C., asserts that he knows by his own experience that the idea that U. S. P. and N. F. formulæ can not be made by the retailer to advantage is false and the most forceful weapon used by the manufacturer to build for themselves enormous fortunes at the expense of the individual pharmacist.—*Proc. Alabama Pharm. Assoc.* 1911, p. 122.

Linke, H., in a review of the Ph. Germ. V, calls renewed attention to the desirability of having the apothecary assume the responsibility for the identity and purity of the preparations dispensed by him.—*Ber. pharm. Gesellsch.* 1911, v. 21, p. 174.

Cowley, R. C., asserts that the tendency for retail pharmacists for many years has been to relegate the manufacturing of galenicals to wholesale druggists, irrespective of the nature, with the result that retail firms know little or nothing of the quality of the medicines they are dispensing.—*Chem. & Drug. Australas.* 1911, v. 26, p. 199.

An unsigned article (*N. A. R. D. Notes*, 1911–1912, v. 13, pp. 145–147) discusses the relative cost of making and buying pharmaceutical preparations and presents a table, showing the comparative cost of a number of U. S. P. and N. F. preparations.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, condemns absolutely the practice of certain pharmacists who prepare tinctures, infusions, and decoctions from special extracts, exploited as of exceptional activity but which have not received official sanction in any country. The Pharmacopœia alone should be the guide of the pharmacist.—*Bull. Soc. roy. pharm.* 1911, v. 55, p. 225. See also *Schweiz. Wchnschr. Chem. u. Pharm.* 1911, v. 49, pp. 528–536.

An editorial (*N. A. R. D. Notes*, 1911, v. 11, p. 1192) asserts that the Committee of Revision of the United States Pharmacopœia has announced that all of the experiments to determine the standards are to be made from a specimen of the drug after it has been identi-

fied by chairman Henry Kraemer of the subcommittee on pharmacognosy. The drug is to be ground to the proper degree of fineness and then distributed to all the subcommittees which have to make assays on pharmaceutical preparations. By this method, it is believed, greater accuracy and uniformity of standards will be insured.

Wilbert, M. I., points out that if pharmacists generally will experiment with and comment on the formulas that are now being considered for admission, there will be no danger of incorporating into the forthcoming edition of the National Formulary formulas that have not been thoroughly tried in the different sections of the country under varying conditions.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 701.

Ekert, G., discusses a number of ancient and curious pharmaceutical galenicals.—*Schweiz. Wchnschr. Chem. u. Pharm.* 1911, v. 49, pp. 1-6.

6. DECOMPOSITION.

Kahn, Joseph, reports the opinion that important drugs and preparations which deteriorate on standing should have a time limit after which they should not be used.—*Proc. New York Pharm. Assoc.* 1911, p. 84.

Brown, Linwood A., urges that every drug store be provided with a refrigerator or closet where things can be kept in the dark and at a temperature of 10-15°. A sample of sweet spirit of nitre, which assayed, when prepared in March, 4.36, after being kept in a refrigerator assayed, on June 7, 4.05; another sample of the same preparation, kept on a shelf in the laboratory, exposed to temperatures of 20° to 35°, assayed 3.60.—*Proc. Kentucky Pharm. Assoc.* 1911, p. 98.

The Board of Pure Food and Drug Commissioners (2d Ann. Rep. Providence, R. I. 1911, p. 7) call attention to the lack of care exercised by druggists in the making and the keeping of preparations and point out that there is no reason why a substance that is directed to be kept in the dark should not be removed from the light and kept in the dark.

A discussion by the City of Washington Branch on the preservation of drugs is reprinted.—*Nat. Druggist*, 1911, v. 41, p. 77.

Wilbert, M. I., in a review of the supplement to the Ph. Ndl. IV, points out that the directions for keeping many of the official drugs and preparations have been somewhat elaborated, particularly those for narcotic leaves and herbs. These drugs are now directed to be protected from the influence of light.—*Am. J. Pharm.* 1911, v. 83, p. 87.

An unsigned abstract quotes from a bulletin of the Kentucky Agricultural Experiment Station a number of valuable hints as to the preservation of crude drugs, syrups, and tincture of iodine.—*Bull.*

Pharm. 1911, v. 25, p. 158. See also Merck's Rep. 1911, v. 20, pp. 1 ff; and Spatula, 1910-1911, v. 17, p. 219.

La Wall and Meade report the results of their examination of several very old fluid extracts.—Pract. Drug. 1911, v. 29, Mar., p. 31.

7. INCOMPATIBILITY.

An unsigned article on the science and art of dispensing (Pharm. J. 1911, v. 87, p. 352) discusses the reaction between salts, precipitation of alkaloids, precipitation by the vehicle, liberation of iodine, and precipitation by acid.

An editorial (Brit. M. J. 1911, v. 2, p. 764) notes that the subject of incompatibility is one of perennial importance, and calls attention to a recent brochure by Walter G. Smith.

Lascoff, J. Leon, discusses a number of difficulties in dispensing.—Pharm. Era, 1911, v. 44, p. 19.

Vandermeulen, A., contributes a note on the incompatibility of potassium iodide and Fowler's solution.—Ann. pharm. Louvain, 1911, v. 17, p. 148.

An editorial note (J. Am. M. Assoc. 1911, v. 56, p. 287) discusses the incompatibility of antipyrine, calomel, and sodium bicarbonate.

Federici, E., discusses the incompatibility of calomel and sodium chloride.—Boll. chim. farm. 1911, v. 50, p. 314. See also de Bella, p. 657, and Ricciardelli, p. 950.

An editorial note (Pract. Drug. 1911, v. 29, Aug., p. 24) points out that one preparation taken internally, while another incompatible with it is applied externally, may cause severe skin irritation.

Dott, D. B., is quoted as remarking that medical men should have added to their curriculum a course of 200 lectures on incompatibility.—Chem. & Drug. 1911, v. 78, p. 283.

8. PERCOLATION.

Beringer, George M., in a review of the Ph. Germ. V states that the German still lovingly adheres to his idol, maceration, and percolation as yet receives but scant consideration in his pharmacopœia. While percolation is directed in a few formulas such as the fluid extracts, where the rate of flow is fixed at 30 drops per minute, yet in other important extractions, such, as for example, extract of nux vomica, maceration and expression is directed.—Proc. New Jersey Pharm. Assoc. 1911, p. 80. Also Am. J. Pharm. 1911, v. 83, p. 332.

An unsigned article (Am. Druggist, 1911, v. 58, p. 137) states that it is surprising to find that in the Ph. Germ. V percolation is strictly limited to the preparation of the eight official fluid extracts, and all tinctures are, as heretofore, to be prepared by maceration. See also Chem. & Drug. 1911, v. 78, p. 631.

Bruns, W., discusses percolation in a partial vacuum.—*Apoth.-Ztg.* 1911, v. 26, pp. 217-218.

Kroeber, Ludwig, reports some observations on the relation of the rapidity of dropping to the extraction by means of percolation.—*Ibid.* p. 978.

Wiebelitz, H., presents some additional comments on the relation of the rapidity of dropping to the efficiency of the method of percolation.—*Ibid.* p. 1001.

Grosh, Daniel M., points out that modern manufacturing percolators are made to stand heavy pressure and be air-tight, the menstruum being forced through the drug by compressed air.—*Merck's Rep.* 1911, v. 20, p. 334.

Bruns, W., in German patent 234,643, describes a method of percolation designed to avoid the waste of menstruum, due largely to the swelling of the particles of drug and the consequent increase in the size of the intervening spaces.—*Chem. Repert.* 1911, v. 35, p. 278.

9. EXTRACTION.

An editorial (*Am. Druggist*, 1911, v. 59, p. 172) points out that the *Ph. Brit.* does not propose to adhere to the requirement of the Brussels Protocol to employ, uniformly, 70 per cent alcohol in the preparation of potent tinctures.

Linke, H., regrets that the *Ph. Germ. V* does not include requirements for extract content, specific gravity, and ash content of the several extractive preparations of drugs. He thinks that permissible limitations could readily have been included in the *Pharmacopœia*.—*Ber. pharm. Gesellsch.* 1911, v. 21, p. 176.

Southall Bros. & Barclay (*Rep.* 1911, Birmingham, 1912, pp. 45-51) present a table showing proposed standards for extractive in various galenical preparations.

Allen and Brewis present a contribution on the moisture and the ash content of drugs, also a table giving the results observed in connection with a number of official extracts.—*Year-Book of Pharmacy*, 1911, pp. 417-419. Also *Chem. & Drug.* 1911, v. 79, p. 214.

Allendorff, H. (*Fr. Pat.* 427,839, Mar. 28, 1911), describes a process for preparing medicinal plants or vegetable products to facilitate the extraction by infusion of their active principles.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 1087.

10. STERILIZATION.

Kahn, Joseph, reports the opinion that the U. S. P. should have a chapter on sterilization.—*Proc. New York Pharm. Assoc.* 1911, p. 85.

An editorial (*Drug. Circ.* 1911, v. 55, p. 164) states that there has been some doubt expressed as to the wisdom of introducing a chapter on sterilization, describing the proper methods for sterilizing medic-

aments and indicating to what preparations each method is especially applicable. The executive as well as the general committee of revision may be relied upon to act in a safe and conservative manner on the report of the special committee.

Bramigk, F., reports some observations on the application of sterilization in pharmacy.—*Pharm. Ztg.* 1911, v. 56, pp. 881–882.

Hitchens, A. Parker, discusses sterilization in pharmacy from a biological point of view.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, pp. 173–175.

Rupp, E., describes and illustrates a simple apparatus for steam sterilization with provisions for drying the articles.—*Apoth.-Ztg.* 1911, v. 26, p. 75. See also pp. 624, 1001.

Menge, G. A., notes that the Ph. Germ. V directions for sterilizing are very general in character, consisting merely in the statement that unless otherwise directed sterilization is accomplished by the application of heat in accordance with the rules of bacteriological technique, giving due regard to the properties of the substance to be sterilized.—*Am. J. Pharm.* 1911, v. 83, p. 225.

Fleissig in a review of the Ph. Germ. V states that the requirements for sterilization are meager and unsatisfactory in comparison with the rather complete directions that have been embodied in the Ph. Helv. IV.—*Schweiz. Wehnschr. Chem. u. Pharm.* 1911, v. 49, p. 317.

Feist, K., describes and illustrates a simple method for the sterilization of apparatus.—*Apoth.-Ztg.* 1911, v. 26, pp. 497–498.

Tschirch, A., discusses the sterilization of drugs.—*Pharm. Era*, 1911, v. 44, p. 479.

Bourquelot, Em., discusses the sterilization and desiccation of medicinal plants.—*J. Pharm. et Chim.* 1911, v. 3, pp. 149–161.

Schneider, Albert, presents some additional contributions on pharmaceutical bacteriology.—*Merck's Rep.* 1911, v. 20, pp. 7–9, 62–64, 245–247.

Henri, Helbronner, and von Recklinghausen (Fr. Pat. 424,369, Mar. 12, 1910) describe an apparatus for the sterilization of liquids by ultra-violet rays. See also Fr. Pat. 425,406, Jan. 30, 1911, and Fr. Pat. 426,297, Apr. 29, 1910.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 978.

Heller, Isaac M., contributes a note on the use of sodium hydroxide for sterilizing instruments.—*J. Am. M. Assoc.* 1911, v. 57, p. 733.

Teague, N. A., in a discussion on the importance of chemistry to dentists calls attention to the chemistry and the need of sterilization.—*Dental Cosmos*, 1911, v. 53, pp. 1023–1028.

An unsigned article (*Pharm. Ztg.* 1911, v. 56, p. 578) discusses the practicability of providing an indicator for the successful sterilization of surgical dressings.

Groves, Ernest W. Hey, outlines a simple test for the efficiency of sterilization.—*Brit. M. J.* 1911, v. 1, p. 879.

11. FORMS OF ADMINISTRATION.

Diner, Jacob, discusses the palatability of medicaments and suggests a number of novel methods for the administration of efficient or active substances.—Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 340-343.

Feist, K., in a discussion of the problems of modern pharmaceutical chemistry, points out that the discovery of alkaloids and the production of synthetic products has materially reduced the use of crude drugs and of galenical preparations.—D.-A. Apoth.-Ztg. 1911-12, v. 32, pp. 113-114, 128-129.

Schmidt, John, describes and illustrates an apparatus for sealing dry cachets.—Pharm. Ztg. 1911, v. 56, p. 151.

An unsigned article (Pharm. Ztg. 1911, v. 56, p. 395) describes and illustrates an apparatus for filling cachets.

Parkes and Roberts contribute a note on the "pearl coating" of pills.—Analyst, 1911, v. 36, p. 389.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 708) notes that *pastæ* is a new class of preparations usually prepared by mixing one or more powdered medicaments with oil, fat, wax, ceresin, vaseline, gelatin, water, or other materials. The only two pastes which are made official for external use are zinc paste and salicylated zinc paste.

Schütte describes and illustrates an apparatus for filling collapsible tubes with ointments.—Pharm. Zentralh. 1911, v. 52, pp. 44-45.

The Massachusetts State Board of Health (Monthly Bulletin, 1911, pp. 16-20) reports an examination of the emergency chests found in different factories throughout the State. The report shows that the outfits required by the several towns vary considerably and that many of these emergency outfits are quite impractical, not a few of them containing useless proprietary preparations.

Beringer, George M., jr., discusses the extemporaneous preparation of medicated gauzes and presents a number of formulas.—Am. J. Pharm. 1911, v. 83, pp. 178-179.

Kilmer, Frederick B., concludes that the rapidly changing conditions of surgical methods would not seem to warrant the insertion in the U. S. P. or in the N. F. of formulas for the preparation of antiseptic surgical dressings. Any standard adopted for medication for surgical dressings would be liable to become valueless long before the next revision.—*Ibid.* p. 424.

Kuhlmann, Ernst, describes a new germ free package for surgical dressings.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 298-302.

Aitken, Chas., reports satisfactory results from solid glycerin gelatin tampons, as substitutes for glycerin soaked vaginal tampons.—Lancet, 1911, v. 180, p. 1457.

AMPOULES.

Hillen, G. H., discusses the extemporaneous filling of ampoules.—Apoth.-Ztg. 1911, v. 26, p. 294. Also Pharm. Post, 1911, v. 44, p. 274.

Telle describes and illustrates an apparatus for the filling of ampoules.—Pharm. Zentralh. 1911, v. 52, pp. 889–893.

van der Wielen, P., discusses the methods for filling and sterilizing ampoules.—Pharm. Weekblad, 1911, v. 48, pp. 1014–1018.

Budde, Th., discusses the production of ampoules, more particularly the use of morphine solutions.—Apoth.-Ztg. 1911, v. 26, p. 167.

Keseling and Serger discuss the production of sterile and stable solutions in the form of ampoules.—Pharm. Ztg. 1911, v. 56, pp. 463–464.

An unsigned article (Apoth.-Ztg. 1911, v. 26, p. 388) describes and illustrates an apparatus for the sterilization and filling of ampoules. See also pp. 623, 708, 921–922.

An unsigned article (Am. Druggist, 1911, v. 58, p. 380) describes and illustrates an apparatus for sterilizing and filling ampoules.

Hamner, J. W., discusses the sterilization of solutions in ampoules.—Svensk. farm. Tidskr. 1911, v. 15, pp. 225–228, 245–248.

An unsigned article (Pharm. Zentralh. 1911, v. 52, p. 1183) describes and illustrates an apparatus for the sterilization and filling of ampoules.

Thomann describes and illustrates an apparatus for the cleaning, sterilization, and filling of ampoules.—Schweiz. Wehnschr. Chem. u. Pharm. 1911, v. 49, pp. 52–53.

An editorial note (Suedd. Apoth. Ztg. 1911, v. 51, p. 206) discusses the complications arising, and the precautions to be observed, in the preparation of liquid medicaments in sealed glass tubes.

CAPSULES.

Beringer, George M., points out that the Ph. Germ. V describes capsules as of two forms, the platter or cup shaped made of wheat flour or wheat starch, and the hollow gelatin capsule.—Proc. New Jersey Pharm. Assoc. 1911, p. 80.

Roderfield, A., in a review of the Ph. Germ. V notes that gelatin capsules are required to dissolve in water of from 36° to 40° within 10 minutes to a clear, colorless, and tasteless solution.—Apoth.-Ztg. 1911, v. 26, p. 262.

The Pharmaceutical Journal (1911, v. 87, p. 464) discusses the science and art of dispensing capsules.

An unsigned article (Apoth.-Ztg. 1911, v. 26, p. 127) describes and illustrates an apparatus for filling powder capsules.

Tobin, John M., discusses the advantages of capsules without tops on them.—Am. Druggist, 1911, v. 58, p. 248.

McGee, Stewart J., describes and illustrates a method of dispensing oils in elastic capsules.—Bull. Pharm. 1911, v. 25, p. 474.

Lowe, C. B., outlines his method for filling capsules, and shows that volatile oils can be dispensed just as well in hard capsules as in the soft gelatin capsules usually employed. He seals the capsules by dipping the end of the cap in a mixture of water, 1 part, alcohol 2 parts, when dry laying them on a sheet of paper to see if any leak.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 219.

Grosh, Daniel M., states that in making elastic filled capsules, presses of great power are used. The gelatin is combined with glycerin and is run in thin sheets, which are placed on the proper molds, slightly heated. The fluid material is poured on the lower sheet, an upper sheet over this, and overall the top of the mold. This is placed in a powerful hydraulic press, capable of pressure of 100 tons, and the combination of intense pressure and heat causes the formation of capsules.—*Merck's Rep.* 1911, v. 20, p. 334.

Ballenger, Edgar G., calls attention to the use of capsules of gelatin hardened with formaldehyde that do not dissolve in the stomach and consequently prevent gastric disturbance.—*Am. Med.* 1911, v. 17, pp. 384-385.

The Paris Correspondent (*J. Am. M. Assoc.* 1911, v. 56, p. 1274) notes that Linossier calls attention to the fallacy of the idea that drugs administered in gluten, keratin or formalized gelatin are not dissolved until after they have passed through the stomach. While these envelopes resist the gastric juice, the soluble substances inclosed in them pass out by osmosis. On plunging commercial capsules of potassium iodide with keratinous or glutinous coating into gastric juice, or even into water, he has seen reactions of iodine in the surrounding liquid appear in less than a minute.

COMPRESSED TABLETS.

Kahn, Joseph, reports the recommendation that a chapter on tablet triturates, hypodermic and compressed tablets be included in the U. S. P. IX.—*Proc. New York Pharm. Assoc.* 1911, p. 84.

Orr, Forrest H., describes his method of making tablet triturates.—*Drug. Circ.* 1911, v. 55, p. 137.

Grosh, Daniel M., notes that the manufacture of hypodermic tablets has remained unchanged, they still being molded by hand, but the making has been improved by the adoption of the most aseptic and hygienic methods.—*Merck's Rep.* 1911, v. 20, p. 334.

Linhart, Joseph, describes the method employed by him for making tablet triturates. He uses sugar of milk as a vehicle and asserts that the ordinary sugar of milk is not powdered finely enough for the preparation of triturate tablets, and should be bolted through a very fine sieve to remove the coarser particles.—*Drug Circ.* 1911, v. 55, p. 124.

Dunnet, David, contributes a brief note on tablet making.—*Chem. & Drug.* 1911, v. 78, p. 206.

An unsigned article (*Pharm. Weekblad*, 1911, v. 48, pp. 113-114) describes and illustrates an apparatus for making compressed tablets. See also pp. 1340-1341.

An unsigned article describes and illustrates a small tablet machine.—*Ztschr. allg. österr. Apoth.-Ver.* 1911, v. 49, p. 28.

Wenderoth, G., describes and illustrates a hand compressing machine for tablets.—*Pharm. Ztg.* 1911, v. 56, p. 150.

Mosley, W., discusses the manufacture of tablets.—*Pharm. J.* 1911, v. 86, p. 6.

Hofman, J. J., discusses the making of compressed tablets and describes and illustrates a machine for making the same.—*Pharm. Weekblad*, 1911, v. 48, pp. 968-976.

The *Pharmaceutical Journal* "Chapter in Practical Pharmacy" deals with the making of compressed tablets and gives illustrations of the apparatus used.—*Pharm. J.* 1911, v. 87, pp. 432-434, 464, 500, 850.

Dunnet, David, discusses the making of compressed tablets and describes several methods for the necessary granulating of the material to be compressed.—*Chem. & Drug.* 1911, v. 78, p. 206.

Berger reviews several articles on the making of compressed tablets and points out that if the apothecary is to be responsible for the different forms of medicines to be dispensed by him, he must retain the making of them in his own laboratory.—*Schweiz. Wehnschr. Chem. u. Pharm.* 1911, v. 49, pp. 11-12.

Woolsey, J. F., states that tablets are now made of the rapidly disintegrating type instead of the hard insoluble tablet of a decade since.—*Pharm. Era*, 1911, v. 44, p. 208.

Bauermeister, W., in German patent 233,606, describes a method for the production of tablets, pills, etc., that will disintegrate readily in the intestinal tract by embodying in the preparations organic gas producing substances.—*Chem. Repert.* 1911, v. 35, p. 242.

Tankard, Arnold Rowsby, urges the value of an efficient test for the disintegration or cohesive properties, as the case may be, of tablets. Such tests should be carried out at blood heat (37°) and, in the case of tablets to be swallowed, in distilled water containing 0.2 per cent of hydrochloric acid, to simulate the acidity of the gastric juice.—*Pharm. J.* 1911, v. 87, p. 73.

An editorial (*J. Am. M. Assoc.* 1911, v. 56, p. 1334) on unreliable pharmaceutical products deals particularly with tablets. See also p. 1344.

Penschuck, H., reports an examination of a number of commercial tablets to determine their weight and the rapidity with which they disintegrate. The weight of the tablet was found to comply fairly well with the claims made for them, but the disintegration varied considerably—from one minute to twenty-four hours.—*Apoth.-Ztg.* 1911, v. 26, p. 679.

Seel and Friederich discuss the examination of compressed tablets and report their own experience to show the variability of the commercial product.—*Pharm. Zentralh.* 1911, v. 52, pp. 991-998, 1055-1062, 1087-1091, 1115-1121.

Patterson, E. B., undertakes to relieve some reputable manufacturers from the suspicion of intentional fraud in the making of tablets.—*J. Am. M. Assoc.* 1911, v. 56, p. 1592.

A news note (*Chem. & Drug.* 1911, v. 78, p. 260) states that compressed tablets threaten once more to become a burning question in Germany. The sick clubs have made a complaint regarding tablets of acetosalicylic acid prepared by pharmacists.

Ford, Charles M., states that the most objectionable thing found in any drug store of his city is the dispensary tablet. It is dangerous, unnecessary, and should be prohibited by law.—*Drug. Circ.* 1911, v. 55, p. 626.

Grosh, Daniel M., discusses the sugar coating of tablets, describes the apparatus used, enumerates the coloring materials usually employed, and presents formulas for the subcoating and the coating to be used.—*Merck's Rep.* 1911, v. 20, pp. 181-182.

Fuller, H. C., reports traces of arsenic in the coating of chocolate coated tablets. On analysis, it was found that the "chocolate" was brown oxide of iron contaminated with arsenic.—*J. Ind. & Eng. Chem.* 1911, v. 3, p. 254.

An editorial (*Eclectic Med. Glean.* 1911, v. 7, p. 117) discussing tablets, states that permanent materials are not objectionable in tablet form if soluble; but physicians soon find that no reliance can be placed upon remedies, the best constituents of which are evanescent or volatile, when put into the lozenge form. The indiscriminate use of tablets is learned by bitter experience by many, while men well versed in the properties of good medicine foresaw the failure that was sure to ensue from the use of tablets.

12. METHODS OF ADMINISTRATION.

Webb, Frank, discusses the hypodermic use of drugs.—*J. Therap. & Diet.* 1911, v. 5, pp. 47, 80, 104, 177, 209, 234, and 269.

Crenshaw, Hansell, describes and illustrates a new and improved hypodermic outfit.—*J. Am. M. Assoc.* 1911, v. 57, p. 2121.

Dixon, W. E., states that an injected drug produces a pronounced effect on the tissues in the neighborhood of inoculation as the result of diffusion, and a much smaller effect on distant tissues, since the drug will only reach these through the circulation after absorption.—*Pharm. J.* 1911, v. 87, p. 15.

Woodbury, Frank Thomas, outlines his technique for hypodermic injections.—*J. Am. M. Assoc.* 1911, v. 56, p. 1654.

An unsigned article (*Fol. Therap.* 1911, v. 5, p. 59) states that there are many circumstances wherein the hypodermic administration of

drugs presents considerable advantages over other methods of medication. This is especially the case when powerful drugs are being used, and where it is essential for the physician closely to follow the therapeutic developments in his patient.

Meltzer, S. J., in discussing the injection of drugs, especially salvarsan into the lumbar muscles, points out that the sacrospinal muscle is exceptionally well suited for intramuscular injection.—*Med. Rec.* 1911, v. 79, pp. 515-517.

Blair, V. P., presents some notes on trifacial neuralgia treated by deep injections, which he thinks probably less dangerous than a Gasserian ganglion operation.—*J. Am. M. Assoc.* 1911, v. 56, pp. 335-339.

Watson, J. J., describes and illustrates a method of fixation of vein to facilitate the introduction of a needle for intravenous injections.—*J. Am. M. Assoc.* 1911, v. 57, p. 383. See also *Lancet*, 1911, v. 181, p. 1569.

Nicholson, Percival, describes and figures a simple apparatus for proctoclysis.—*J. Am. M. Assoc.* 1911, v. 56, p. 873.

Young, Henry W. P., describes and illustrates a simple apparatus for proctoclysis, using a thermos flask.—*Brit. M. J.* 1911, v. 1, p. 90.

Cannaday, John Egerton, describes a simple drop method of giving rectal enemas of normal saline solution.—*J. Am. M. Assoc.* 1911, v. 56, p. 1097.

Waller and Walker present a paper on the management of epidemic summer diarrhoea and vomiting, including the use of saline injections. They illustrate a method of infusion with a vacuum flask.—*Brit. M. J.* 1911, v. 2, p. 594.

Bürgi, E. (*Berl. klin. Wchnschr.* v. 48, No. 20), has made over 1,500 experiments on rabbits with combinations of different drugs in eleven groups, mostly narcotics, and has discovered several laws regulating the action of the various combinations.—*J. Am. M. Assoc.* 1911, v. 56, p. 1862.

Dixon, W. E., presents some considerations on the absorption and excretion of drugs.—*Pharm. J.* 1911, v. 87, pp. 15-17. See also *Merck's Rep.* 1911, v. 20, pp. 312-314, and *Am. Druggist*, 1911, v. 59, p. 106.

Lépine, R., discusses the influence of the route of entry on the effects of medicaments, with special reference to intravenous and subcutaneous injections in diabetics.—*Compt. rend. Soc. Biol.* 1911, v. 70, p. 986. See also p. 463.

Loeb and Wasteneys report their observations on the detoxication of acids by salts.—*Biochem. Ztschr.* 1911, v. 33, pp. 489-502.

Buxton, Dudley W., discusses the surgical requirements of narcosis and the available methods.—*Brit. M. J.* 1911, v. 2, pp. 1145-1150.

An unsigned article (*Pharm. Ztg.* 1911, v. 56, p. 578) describes and illustrates a universal inhalation apparatus.

II. INTERNATIONAL STANDARDS.

1. INTERNATIONAL CONFERENCE FOR THE UNIFICATION OF PHARMACOPŒIAL FORMULÆ FOR POTENT MEDICAMENTS (BRUSSELS CONFERENCE).

1. ADOPTION OF BRUSSELS CONFERENCE PROTOCOL.

The Paris Correspondent (Chem. & Drug. 1911, v. 79, p. 530) notes that the Paris Academy has voted in favor of the proposal to create an International Secretaryship of Pharmacopœias, with the head office at Brussels. It is stated that the Governments of Austria, Denmark, Spain, Holland, Italy, Norway, Russia, and Switzerland have already sent favorable replies in support of the suggestion. See also Pharm. Weekblad, 1911, v. 48, p. 1136, and J. Pharm. et Chim. 1191, v. 4, p. v.

An editorial (Chem. & Drug. 1911, v. 79, p. 17) recognizes that pharmacopœias are ceasing to be academic in character, and must become less representative of the ideal, and more consistent with commercial possibilities in association with therapeutic requirements. As these conditions vary in different countries, it is probable that a digest prepared internationally would not be of particular service. See also *Ibid.* p. 75.

An editorial (Am. Druggist, 1911, v. 59, p. 2) suggests the formation of an international committee which would take into consideration the whole question of pharmacopœial and pharmaceutical nomenclature. See also pp. 120, 173-174.

Remington, Joseph P., is reported as stating that the findings of the International Congress at Brussels did not necessarily mean that every pharmacopœia should adhere to them. He advocates that every country should decide for itself the details of pharmaceutical manipulation.—Oil, Paint, and Drug Reporter, 1911, v. 80, October 23, p. 9.

A review of the Ph. Germ. V (Brit. M. J. 1911, v. 1, p. 763) states that the interest in any given pharmacopœia is necessarily less outside the country in which its provisions are binding; but science, industry, and commerce are so largely international that the progress in medicine and pharmacy in one country, as registered in the differences between two successive editions of its national pharmacopœia, is roughly representative of the progress in the same direction in any of the countries of Western civilization.

Ranwez, F., discusses international unification of heroic remedies, especially with reference to the Ph. Germ. V.—Ann. pharm. Louvain, 1911, v. 17, pp. 465-470.

An unsigned note (J. Pharm. et Chim. 1911, v. 3, p. xlvii), comments on the particulars in which the Ph. Germ. V does not comply with the terms of the Brussels Conference, and the reasons assigned therefor. See also Bull. sc. pharmacol. 1911, v. 18, Annexes, p. 141.

Beringer, George M., in a review of the Ph. Germ. V, states that the attempt to follow the Protocol of the Brussels Conference is evidenced not only in the adoption of the normal drop counter recommended but also in the adoption of many of the formulas and standards for potent drugs. Such adoption is indicated by a subtitle in Latin with P. I. appended.—Proc. New Jersey Pharm. Assoc. 1911, p. 78. Also Am. J. Pharm. 1911, v. 83, p. 330.

Hübner, Otto, in commenting on the Ph. Germ. V, notes that some of the provisions of the International Conference at Brussels have been adhered to, while others, particularly the production of tinctures by means of percolation, have been ignored.—Fortschr. Chem. 1911, v. 4, p. 148.

Fleissig in a review of the Ph. Germ. V notes that the requirements of the Brussels Conference Protocol have been adhered to, practically the only exception being the method of preparing tinctures, which, as is well known, was foreshadowed at the time that the treaty was signed by an exception registered by the German delegates.—Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, p. 318.

van Itallie, E. I., reports observations on the specific gravity and extract content of a number of official Ph. Ndl. IV tinctures and discusses more especially some of the tinctures included in the Brussels Conference Protocol.—Pharm. Weekblad, 1911, v. 48, pp. 717-719.

Xrayser II is especially glad that the Ph. Brit. committee has declined to adopt the percentages and spirit strengths provided for in the Brussels international convention. It was obviously a mistake to require tinctures to be made with practically one strength of spirit only, namely, 70 per cent, and it is surprising that this error was not detected before it was too late.—Chem. & Drug. 1911, v. 79, p. 381.

An editorial (Am. Druggist, 1911, v. 59, p. 207) calls attention to some of the characteristic features of the Greek dispensatory published by A. Dambergis.

Hübner, Otto, in discussing the Ph. Germ. V, points out that the standards of the Brussels Conference Protocol are of limited value so long as uniform methods of testing are not agreed upon.—Fortschr. Chem. 1911, v. 4, p. 148.

A news note (*Drug. Circ.* 1911, v. 55, p. 330) calls attention to the proposed international federation of pharmaceutical associations, one of the objects of which is to be the promoting of uniformity in the form of medicines and methods of investigations. See also *Am. Druggist*, 1911, v. 58, p. 375; *Pharm. J.* 1911, v. 86, p. 202; *Chem. & Drug.* 1911, v. 78, p. 667; and *J. Pharm. et Chim.* 1911, v. 4, pp. xlv-xlviii.

The statutes of the International Pharmaceutical Confederation are given in the *Bull. Soc. roy. pharm. Brux.* 1911, v. 55, pp. 299-305.

The International Federation of Pharmacy presents the following list of pharmaceutical congresses that have been held:

I Congress	Sept. 15-17,	1865, Brunswick.
II Congress	Aug. 11-14,	1867, Paris.
III Congress	Sept. 9-11,	1869, Vienna.
IV Congress	August,	1874, St. Petersburg.
V Congress	Aug. 1-3,	1881, London.
VI Congress	Aug. 31-Sept. 6,	1885, Brussels.
VII Congress	Aug. 21-23,	1893, Chicago,
VIII Congress	Aug. 14-19,	1897, Brussels.
IX Congress	Sept. 2-8,	1900, Paris.
X Congress	Sept. 1-5,	1910, Brussels.

—*Pharm. Weekblad*, 1911, v. 48, p. 1173.

An editorial (*Am. Druggist*, 1911, v. 58, p. 375) discusses the desirability of endorsing the movement for federating in one big body the pharmaceutical associations of the world, so as to bring together the representative pharmaceutical organizations in different countries in an international council for the development of international standards.

Hunt, Reid, presents a report of the proceedings of the Tenth International Congress of Pharmacy, Brussels, September 1-6, 1910.—*Am. J. Pharm.* 1911, v. 83, pp. 24-27. See also p. 446.

An unsigned article (*Pharm. Post*, 1911, v. 44, pp. 1095-1104) reviews the proceedings of the Tenth International Congress of Pharmacy held in Brussels, and points out that, contrary to some of the previous congresses, this latter congress is destined to make for permanent progress in the matter of securing international standards for strength, purity, and methods of testing pharmacopœial articles.

Burios, Hans Karl, in an article on international pharmacy, calls attention to some of the pharmaceutical preparations that are being popularized throughout the world.—*Pharm. Ztg.* 1911, v. 56, pp. 779-781.

A book review (*Pharm. Ztg.* 1911, v. 56, p. 275) calls attention to "Poliglota Vade-Mecum de Internacia Farmacio" by Célestin Rousseau. See also *Am. Druggist*, 1911, v. 58, p. 313.

2. DROPS AND DROPPERS.

Raubenheimer, Otto, makes a plea for a normal medicine dropper.—Pharm. Era, 1911, v. 44, p. 60. See also p. 114.

Kahn, Joseph, reports the recommendation that a standard dropper be adopted.—New York Pharm. Assoc. 1911, p. 85.

An unsigned article (New Idea, 1911, v. 33, pp. 173-175) describes and illustrates the making of a medicine dropper.

Hübner, Otto, in a review of the Ph. Germ. V, points out that this Pharmacopœia has adopted the international standard drop counter, has wisely ignored the controversy that has developed in relation to the construction of the dropper, and simply requires that 20 drops of distilled water should weigh 1 gramme.—Fortschr. Chem. 1911, v. 4, p. 148.

Diekman, George C., reports the recommendation that the official medicine dropper have its delivery end three millimeters in external diameter and adapted to deliver 20 drops of distilled water to a gramme at 15°.—Proc. New York Pharm. Assoc. 1911, p. 91.

Raubenheimer, Otto, has found droppers that deliver from 50 to 75 drops to the drachm, while others deliver only from 20 to 40 drops to the drachm.—*Ibid.* p. 96.

Beringer, George M., points out that the Ph. Germ V has adopted the normal drop counter of the Brussels Conference.—Proc. New Jersey Pharm. Assoc. 1911, p. 77. Also Am. J. Pharm. 1911, v. 83, p. 329.

An unsigned article (Pharm. Ztg. 1911, v. 56, p. 191) describes and illustrates forms of drop counters which will comply with the requirements of the Ph. Germ. V. See also Am. Druggist, 1911, v. 58, p. 36.

Kunz-Krause describes and illustrates a normal drop counter of the Salleron type.—Pharm. Zentralh. 1911, v. 52, p. 887. See also pp. 1311-1313; Pharm. Ztg. 1911, v. 56, p. 970; and Suedd. Apoth. Ztg. 1911, v. 51, p. 773.

Wulff and Hillen describe and illustrate a normal drop ampoule which they believe to be particularly well adapted to serve as the normal drop counter provided for by the Brussels Conference Protocol.—Pharm. Post, 1911, v. 44, p. 53; Pharm. Ztg. 1911, v. 56, p. 36; Pharm. Weekblad, 1911, v. 48, pp. 335-336; and Am. Druggist, 1911, v. 58, p. 212.

An unsigned article (Apoth.-Ztg. 1911, v. 26, p. 921) describes and illustrates several new forms of drop counters. See also pp. 932 and 953.

Morgan and others, in some further contributions on the weight of a falling drop and the laws of Tate, discuss the standardization of the drop surface, the drop weights of various liquids and the surface ten-

sion and molecular weights calculated from them.—*Ztschr. physik. Chem.* 1911–1912, v. 78, pp. 129–147, 148–168, 185–207. Also *J. Am. Chem. Soc.* 1911, v. 33, pp. 349–362, 643–657, 657–672, 672–684, 1041–1060, 1060–1071, and 1275–1290.

2. FOREIGN PHARMACOPŒIAS.

1. GERMAN.

The new German Pharmacopœia has perhaps been more actively discussed in European drug and pharmaceutical journals than any pharmacopœia published up to the present time. Much of this discussion has been of a critical nature and some of it caustic, but all of it, no doubt, will prove beneficial either directly or indirectly and should go far toward making the next edition of that pharmacopœia and the coming editions of other pharmacopœias more representative of the best in the practice of medicine and pharmacy of their particular countries.

Wilbert, M. I., points out that the Ph. Germ. V represents a somewhat radical change in the method of revising that book in that it is the direct product of the "Reichs Gesundheitsamt," being compiled by the division on *materia medica*. This division consists of two subdivisions, one medical and one pharmaceutical, and the work on the pharmacopœia represents the contributions of 26 experts.—*Am. J. Pharm.* 1911, v. 83, pp. 128–129.

Menge, G. A., discusses the general requirements of the Ph. Germ. V.—*Ibid.* pp. 224–230.

True, Rodney H., is reported as discussing the pharmacology and the nomenclature of botanical drugs in the Ph. Germ. V.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 184. Also Meyer Bros. *Drug.* 1911, v. 32, p. 133.

Beringer, George M., presents a review of the Ph. Germ. V and points out that many of the advances embodied in that book are meritorious and will have a marked influence on the revision of other pharmacopœias.—*Proc. New Jersey Pharm. Assoc.* 1911, pp. 74–82. See also *Am. J. Pharm.* 1911, v. 83, p. 326.

Raubenheimer, Otto, characterizes the Ph. Germ. V as a sane pharmacopœia, and outlines some of its features.—*Pharm. Era*, 1911, v. 44, p. 114.

An editorial (*Am. Druggist*, 1911, v. 58, pp. 35–36) reviews the Ph. Germ. V, and calls attention to some of the interesting features of the book.

An editorial (*Rev. Am. Farm. y Med.* 1910–1911, v. 15, January, 1911, pp. 22–24) reviews the Ph. Germ. V, presents a list of the additions and deletions, discusses the nature of the monographs, and calls attention to some of the other novel features of the book.

A book review (*Lancet*, 1911, v. 180, p. 118) calls attention to the new German pharmacopœia.

A brief review (*Brit. M. J.* 1911, v. 1, p. 763) notes that the new German pharmacopœia will, no doubt, receive in England, at least until the publication of the next British pharmacopœia, the attention due the thoroughness and care with which the revision has evidently been carried out.

An unsigned article (*Pharm. J.* 1911, v. 86, pp. 93-94, 205-206, 295-296) discusses the assay processes of the Ph. Germ. V.

The same journal (1911, v. 86, pp. 496, 581, 653) reviews the standards and tests of the Ph. Germ. V.

An unsigned review of the Ph. Germ. V (*Chem. & Drug.* 1911, v. 78, pp. 631-632) calls attention to some of the changes included in the galenical preparations and states that only a limited number (20) of new galenicals have been included in the new edition.

Heubner, in a review of the Ph. Germ. V, regrets the inclusion of a number of articles of doubtful value. He mentions specifically barium chloride, which he believes has not been thoroughly well established in therapy, and heroin, which at best can hardly be accepted as an improvement on morphine.—*Therap. Monatsh.* 1911, v. 25, pp. 294-295.

Kobert discusses the Ph. Germ. V and calls attention to some of the new remedies that have been admitted.—*Apoth.-Ztg.* 1911, v. 26, p. 498. See also *Pharm. Ztg.* 1911, v. 56, p. 381.

An editorial (*Pharm. Ztg.* 1911, v. 56, p. 572) enumerates in the form of a table the form of recognition given to trade names in the Ph. Germ. V, whether as to main titles or as to synonyms.

Kroeber, Ludwig, calls attention to the difficulties involved in the relabelling of shop containers with the official Ph. Germ. V nonproprietary titles.—*Apoth.-Ztg.* 1911, v. 26, p. 403.

An unsigned article (*Chem. Ind.* 1911, v. 34, pp. 3-4) calls attention to the Ph. Germ. V. See also review, p. 27.

Hartwich, C., continues his review of the crude drugs of the Ph. Germ. V.—*Apoth.-Ztg.* 1911, v. 26, p. 6 ff.

Rosenthaler, J., continues his review of the pharmacognosy of the Ph. Germ. V.—*Pharm. Zentralh.* 1911, v. 52, p. 28 ff.

Gilg, Ernst, presents a review of the drugs included in Ph. Germ. V.—*Ber. pharm. Gesellsch.* 1911, v. 21, pp. 5-12.

Düsterbehn, F., reviews the chemical portion of the Ph. Germ. V.—*Apoth.-Ztg.* 1911, v. 26, p. 105 ff.

Schneider, A., continues his review of the chemical substances included in the Ph. Germ. V.—*Pharm. Zentralh.* 1911, v. 52, pp. 17 ff.

Schimmel & Co. (Semi-Annual Report, April, 1911, pp. 124-130) review the Ph. Germ. V, and call attention more particularly to the requirements made in that book for essential oils. See also *Ibid.* October, 1911, pp. 109-110.

Rosenthaler, L., reviews the fixed and volatile oils of the Ph. Germ. V.—Pharm. Zentralh. 1911, v. 52, pp. 14–17.

Roderfeld, A., discusses the spirits and tinctures of the Ph. Germ. V.—Apoth.-Ztg. 1911, v. 26, pp. 290–291.

Gehe & Co. (Handelsbericht, 1911, pp. 49–50) call attention to some of the changes embodied in the Ph. Germ. V.

Anselmino, O., discusses the Ph. Germ. V and some of the changes embodied therein.—Ztschr. ang. Chem. 1911, v. 24, pp. 223–225. See also Chem. Ztg. 1911, v. 35, pp. 20–22.

Hübner, Otto, in a review of pharmaceutical chemistry, discusses the new Ph. Germ. V.—Fortschr. Chem. 1911, v. 4, pp. 147–154.

The Süddeutsche Apotheker Zeitung (1911, v. 51, pp. 2, 10, 19, 26, 34, 42, 50, 58, 66, 74, 82, 92, 101) presents a review of the new German Pharmacopœia. For an editorial review, see pp. 344, 352, 360.

Linke, H., reports his practical experiences with the Ph. Germ. V.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 168–200.

Laux, W., discusses the general requirements of the Ph. Germ. V and comments on some of the tests and reagents.—Apoth.-Ztg. 1911, v. 26, pp. 178–183.

Heyl, Georg, describes, with illustrations, the technical methods for testing Ph. Germ. V chemicals.—*Ibid.* pp. 444–446, 453–455, 461–463, 474–476, 485–487, 495–497, 508–510, 520–521, 531–533.

Frerichs and Mannheim, in a discussion on the testing of medicaments in accordance with the Ph. Germ. V, state that much of the criticism that has been made of the new pharmacopœia is due to the difficulties that are involved in applying new and unusual tests.—*Ibid.*, p. 544.

Caesar & Loretz (Jahres-Bericht, 1911, p. 4), discussing the Ph. Germ. V, point out that the methods for testing products included in this book have been materially elaborated.

Linke, H., reviews the Hager-Fischer-Hartwig Commentary on the Ph. Germ. V.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 280 ff.

Mentzel, H., reviews the Pharmakopoe-Bericht, a critical discussion of the vegetable drugs of the Ph. Germ., by Caesar & Loretz.—Pharm. Zentralh. 1911, v. 52, p. 119.

A book review (Ber. pharm. Gesellsch. 1911, v. 21, p. 460) calls attention to a volume on the assays of the Ph. Germ. V, by Hugo Bauer.

Fleissig presents a lengthy review of the Ph. Germ. V and compares the several requirements with those of the Ph. Helv. IV.—Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, pp. 317 ff.

Mossler, Gustav., in a review of the Ph. Germ. V, discusses the non-structural drugs.—Ztschr. allg. österr. Apoth.-Ver. 1911, v. 49, pp. 175–177. See also Pharm. Post, 1911, v. 44, pp. 221 ff.

Mitlacher, Wilhelm, in a review of the Ph. Germ. V, discusses the pharmacognosy of that book, and compares the official requirements

with those embodied in the Ph. Austr. VIII.—*Ztschr. allg. österr. Apoth.-Ver.* 1911, v. 49, pp. 235-238. See also pp. 118-119, 127-128, 135-137, 151-153.

Hérissey, H., presents a review of the new German pharmacopœia.—*J. Pharm. et Chim.* 1911, v. 3, pp. 345-354.

Bettink, H. Wefers, discusses the Ph. Germ. V and compares some of the requirements with those embodied in the Ph. Ndl. IV.—*Pharm. Weekblad*, 1911, v. 48, pp. 212-217, 242-246, 271-273, 284-290, 312-316, 336-340, 376-380, 409-413, 439-443, 482-486, 502-506, 548-550, 588-598.

Delphin, T., reviews the new German pharmacopœia.—*Svensk farm. Tidskr.* 1911, v. 15, pp. 101-105, 121-124, 141-145.

An unsigned review (*Pharm. Ztg.* 1911, v. 56, p. 16) points out that the Ph. Germ. V has generally been received, both in Germany and in foreign countries, with the appreciation which it rightly deserves.

"C. J.", in a review of the Ph. Germ. V, calls attention to several inconsistencies that have arisen in connection with this pharmacopœia and the failure to include some of the more active medicaments in the tables of articles in connection with which special precautions are to be exercised.—*Pharm. Ztg.* 1911, v. 56, p. 57.

An editorial (*Pharm. Ztg.* 1911, v. 56, pp. 205-206) discusses the orders giving official recognition to the Ph. Germ. V in the different German States.

An unsigned review of the Ph. Germ. V (*Pharm. J.* 1911, v. 86, pp. 496-497) notes that the changes which have been made in the official requirements do not in most cases demand a higher quality or greater strength of the various substances described, but they give greater precision to the requirements, and define within more clearly specified limits what qualities are suitable for use and what must be rejected.

Bettink, H. Wefers, presents tables showing the requirements for fats and fatty oils, and the limitations for single and daily doses in the Ph. Germ. V and the Ph. Ndl. IV.—*Pharm. Weekblad*, 1911, v. 48, pp. 595-598.

2. RUSSIAN.

Gehe & Co. (*Handelsbericht*, 1911, pp. 50-51) call attention to some of the changes embodied in the Ph. Ross. IV.

Wilbert, M. I., presents a review of the Ph. Ross. VI, calls attention to some of the characteristic features of this book, and enumerates the new remedies that have been included therein.—*Am. J. Pharm.* 1911, v. 83, pp. 27-29.

An editorial (*Rev. Am. Farm. y Med.* 1910-11, v. 15, December, pp. 17-18) reviews the new Ph. Ross. VI, and calls attention to some of the novel features of the book.

Schimmel & Co. (Semi-Annual Report, April, 1911, pp. 130-134) present a review of the Ph. Ross. VI and call attention more particularly to the requirements made in that book for essential oils.

An unsigned abstract (Oil & Color Tr. J.) expresses regret that the latest edition of the Russian pharmacopœia has not paid nearly sufficient attention to the development of the chemistry of essential oils during the past ten years, and to a very large extent merely reproduces the old monographs, many of which are full of errors.—*Am. Perf.* 1911-12, v. 6, p. 155.

3. ITALIAN.

Bettink, H. Wefers, reviews the Ph. Ital. III and compares some of the features of this pharmacopœia with those of the Ph. Ndl. IV.—*Pharm. Weekblad*, 1911, v. 48, pp. 1234-1239.

Nigrisoli, Vittorio, comments on the Ph. Ital. III.—*Boll. chim. farm.* 1911, v. 50, pp. 579, 661, 805, 873.

Gehe & Co. (*Handelsbericht*, 1911, p. 51) comment on the appendix of the Ph. Ital. III, and state that the Italian apothecaries are objecting vigorously to the continuance of the descriptions of proprietary remedies.

4. FRENCH.

Vigneron discusses the Codex and the laws against adulteration.—*Bull. sc. pharmacol.* 1911, v. 18, Annexes, pp. 1-7.

Bardet discusses the relation of the new to the old Codex with reference to current prescriptions.—*J. Pharm. et Chim.* 1911, v. 4, pp. 44. See also p. 84.

The Tenth Chamber of the Tribunal de la Seine, according to the Paris Correspondent (*Chem. & Drug.* 1911, v. 78, p. 276), decided in a recent case that when one formula is replaced by another in the Codex, which is the legal pharmaceutical formulary, the old formula must necessarily be discarded, confirming this view by a reference to the preface of the Codex, which states that when a formula is modified the formula in the new edition becomes exclusively official.

An editorial (*Am. Druggist*, 1911, v. 58, p. 373) points out that the new Codex, the use of which was made obligatory in France in 1909, provides for numerous changes in the old order and entails numerous difficulties for the pharmacists of France.

The Paris Correspondent (*Chem. & Drug.* 1911, v. 79, p. 403) calls attention to the systematic and practical manner in which the Wholesale Druggists' Association organized its proposals for the revision of the Codex.

According to the *Pharmaceutical Journal* (1911, v. 86, p. 860), the recommendations of the Syndicate of Wholesale Druggists, based entirely upon commercial considerations, will be forwarded to the permanent committee for the revision of the pharmacopœia.

The Paris Correspondent (Chem. & Drug. 1911, v. 79, p. 530) reports that the French Codex of 1908 has been adopted as the official pharmacopœia of the Republic of Santo Domingo. The law will become obligatory throughout the Republic six months after July 26, 1911.

Gehe & Co. (Handelsbericht, 1911, p. 51), commenting on the French Codex, point out that a permanent special committee on the pharmacopœia has been created and that this commission is now at work preparing for a new edition; the publication of a supplement is found necessary.

The Paris Correspondent (Chem. & Drug. 1911, v. 78, p. 425) gives the personnel of the 6 subcommittees which will share the work of the permanent commission of the French Codex. See also Am. Druggist, 1911, v. 58, p. 277.

Poulenc, Camille, presents the report of the committee of the Paris Pharmaceutical Society on modifications to be proposed to the Codex commission.—J. Pharm. et Chim. 1911, v. 4, pp. 433-440, 537-544.

An editorial (Am. Druggist, 1911, v. 58, p. 342) reviews the fifteenth edition of Dorvault's "L'Officine ou Répertoire Général de Pharmacie Pratique."

5. SWEDISH.

Delphin, T., comments on the current pharmacopœia.—Svensk. farm. Tidskr. 1911, v. 15, pp. 365-370, 429.

6. SWISS.

Fleissig presents a lengthy review of the Ph. Germ. V, and compares the several requirements with those of the Ph. Helv. IV.—Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, pp. 317 ff.

An unsigned article (*Ibid.* p. 528) calls attention to a commentary on the Ph. Helv. IV, by E. Beuttner.

7. AUSTRIAN.

Mitlacher, Wilhelm, compares the pharmacognosy of the Ph. Germ. V with that of the Ph. Austr. VIII.—Ztschr. allg. österr. Apoth.-Ver. 1911, v. 49, pp. 235-238.

An unsigned article (Veröffentl. kais. Gesundh. 35, p. 211) calls attention to the order of the Austrian Minister of the Interior concerning changes in the Austrian pharmacopœia, eighth edition.—Chem. Abstr. 1911, v. 5, p. 2145.

8. JAPANESE.

An Eastern Correspondent (Chem. & Drug. 1911, v. 79, p. 140) announces that the Japanese pharmacopœia is to be issued in a

revised form at the end of 1915. The present edition is being unfavorably criticized.

9. DUTCH.

Wilbert, M. I., reviews the supplement to the Ph. Ndl. IV, and calls attention to some of the new titles and other innovations.—*Am. J. Pharm.* 1911, v. 83, pp. 86–87.

Hérissey, H., presents a brief review of the supplement to the Ph. Ndl. IV.—*J. Pharm. et Chim.* 1911, v. 3, pp. 403–405.

Gehe & Co. (*Handelsbericht*, 1911, p. 52) review the supplement of the Ph. Ndl. IV, and call attention to the additions, fourteen in number, contained therein.

Schimmel & Co. (*Semi-Annual Report*, October, 1911, p. 110) comment on the supplement to the Ph. Ndl. IV, dated July, 1910. They point out that the endeavor of the pharmacopœia council to remove officially any errors and mistakes contained in the pharmacopœia, which is finding expression in the publication of such supplements, deserves high commendation. It would be desirable that very many pharmacopœia councils follow the Dutch example.

Bettink, H. Wefers, discusses the Ph. Germ. V and compares some of the requirements with those embodied in the Ph. Ndl. IV.—*Pharm. Weekblad*, 1911, v. 48, pp. 212–217, 242–246, 271–273, 284–290, 312–316, 336–340, 376–380, 409–413, 439–443, 482–486, 502–506, 548–550, 588–598.

He also reviews the Ph. Ital. III and compares some of the features of this pharmacopœia with those of the Ph. Ndl. IV.—*Ibid.* pp. 1234–1239.

10. BRITISH.

An editorial (*Pharm. J.* 1911, v. 87, p. 295) calls attention to the Third Report of the Committee of Reference in Pharmacy containing suggestions or recommendations based on work accomplished by that Committee, in connection with the approaching revision of the British pharmacopœia. The present installment includes many, if not all, of the changes involved in an attempt at compliance with the provisions of the Brussels Protocol. See also *Chem. & Drug.* 1911, v. 79, pp. 352, 354–358, *Am. Druggist*, 1911, v. 59, p. 172.

The Third Report of the Committee of Reference in Pharmacy to the Pharmacopœia Committee of the Central Medical Council, published under date of May, 1911, by Spottiswoode & Co., Ltd., 5 New-Street Square, London, price one shilling, constitutes a pamphlet of 38 pages. This includes the results of work accomplished by the Committee of Reference in Pharmacy in connection with the revision of the British pharmacopœia from January 20, 1910, to May 18, 1911. A supplementary report by Walter Hills, chairman, appears in the

form of a pamphlet of 5 pages under date of July 31, 1911. This includes additional data on subjects previously reported.

The Pharmaceutical Journal (1911, v. 87, pp. 430, 460, 494, 524, 554, 590) presents a critical survey of the suggestions for pharmacopœia revision made in the three reports and supplementary report of the Committee of Reference in Pharmacy to the Pharmacopœia Committee of the General Medical Council. See also Chem. & Drug. 1911, v. 79, pp. 354-358, and Brit. & Col. Drug. 1911, v. 60, p. 167.

White, Edmund, in resigning as a member of the British Pharmacopœia Committee of Reference in Pharmacy, expresses himself as being dissatisfied with the progress that is being made in revising the British pharmacopœia. He thinks conditions existing in connection with the revision of the British pharmacopœia are quite unsatisfactory and points out that the German pharmacopœia, which is now a State publication, has been developed along much more satisfactory lines.—Chem. & Drug. 1911, v. 78, pp. 186-187.

Xrayser II, commenting on the long overdue Ph. Brit., thinks it is high time some other tribunal had the business in hand. The fact that the authors of "Squire" and "Martindale" can find the time and means of keeping their volumes up to date would seem to prove that a more frequent issue of the national pharmacopœia ought certainly not be impossible.—*Ibid.* v. 79, p. 381.

The Pharmaceutical Journal (1911, v. 87, p. 877) criticizes rather severely the several reports of the Committee of Reference in Pharmacy to the General Medical Council.

Tankard, Arnold Rowsby, gives his opinion that the British pharmacopœia should be made the legal standard for the preparations and drugs therein described, subject to the compilation of a schedule of exempted substances, if thought necessary.—Pharm. J. 1911, v. 87, p. 73.

Voelcker, E. W., notes that a conference, organized by the County Councils' Association in London, recommended that the British pharmacopœia should be made a legal standard for medicinal articles, but not until the new addition shall have been compiled by the General Medical Council.—Analyst, 1911, v. 36, p. 47.

An editorial (Chem. & Drug. 1911, v. 79, p. 481) comments on the editors of the new British pharmacopœia. See also pp. 507, 509; and Brit. & Col. Drug. 1911, v. 60, p. 238.

An editorial note (Phar. J. 1911, v. 86, p. 703) states that according to the President of the General Medical Council, revision of the British pharmacopœia may be expected to begin shortly, now that sufficient materials for revision have accumulated.

The Pharmacopœia Committee of the General Medical Council reports that the editors of the new issue of the pharmacopœia are

now engaged in classifying the materials relating to the revision of the text which have accumulated in the committee's hands.—*Chem. & Drug.* 1911, v. 79, p. 856.

Macalister, Donald, states that some years must elapse before the work initiated is ready for publication, a fresh impression of the official British pharmacopœia, 1898, has been ordered, to meet the steady demand for it which still exists.—*Pharm. J.* 1911, v. 86, p. 718. See also *Brit. M. J.* 1911, v. 2, p. 515.

Brown, J. MacDonald, declares that the fact that the last edition of the *Ph. Brit.* was entrusted to a committee composed of nine doctors and one chemist is an anachronism, which in editions to come will be swept away by the progressive spirit of the age; he pleads that the pharmacist be allowed much more freedom of action than has apparently been given in the past.—*Pharm. J.* 1911, v. 87, p. 473.

Xrayser II notes that "some years must elapse" before the new pharmacopœia can be published. He considers this an extraordinary confession to make, one that is utterly incomprehensible to him. It is absurd that while practically every country in the world can have a new pharmacopœia every ten years, Great Britain and its greater dependencies must be content with one every 15 years, or sometimes even longer.—*Chem. & Drug.* 1911, v. 78, p. 819.

11. BRITISH PHARMACEUTICAL CODEX.

Woolcock, W. J. Uglow, reviews the British Pharmaceutical Codex and comments on its relation to the development of pharmacy.—*Pharm. J.* 1911, v. 86, pp. 180–183.

An unsigned review (*Chem. & Drug.* 1911, v. 79, p. 788) closes with the comment that, regarded as a whole, the revised B. P. C. does not "make good" the somewhat pretentious promises which heralded its publication.

An editorial note (*Pharm. J.* 1911, v. 87, p. 22) calls attention to the fact that the second B. P. C. is an entirely new work and not a reprint.

A book review (*Pharm. Ztg.* 1911, v. 56, pp. 1003–1004) calls attention to the nature, the object, and some of the possible uses of the B. P. C. 1911.

An editorial (*Pharm. J.* 1911, v. 87, p. 658) calls attention to the new B. P. C. and some of the favorable comments upon it.

Hawthorne, C. O., reviews the Codex from a medical point of view.—*Ibid.* p. 659.

See also Fry, Walter E., *Ibid.* p. 660.

Pollard, E. W., and others review the Codex from the standpoint of the analyst.—*Ibid.* pp. 662–665, 669.

Crombie, James, criticizes some of the preparations of the new B. P. C.—*Ibid.* p. 857.

Dixon, W. E., discusses the Codex from the point of view of the medical profession.—*Ibid.* v. 86, pp. 179–180.

An editorial note (*Ibid.* v. 86, p. 169) calls attention to the B. P. C. and its relation to the medical profession, and adds that the pharmacological notes, by W. E. Dixon, were intended to separate the wheat from the chaff, the valid from the nonvalid evidence, and only to record facts which can be substantiated by reliable evidence.

III. COMMENTS ON OFFICIAL ARTICLES.

ACACIA.

Lloyd, John Uri, states that acacia has been an article of commerce since the most remote records of historical antiquity.—Bull. Lloyd Libr. 1911, No. 18, p. 1.

Murray, B. L., questions whether or no powdered acacia is an official article. If the Pharmacopœia recognizes acacia as occurring in the form of a powder, it does not specifically so state.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 12.

Hartwich, C., points out that the Ph. Germ. V now includes tests for starch and dextrin in acacia.—Apoth.-Ztg. 1911, v. 26, p. 22. See also Pharm. J. 1911, v. 86, p. 654.

Miller, Adolph W., reports that the gum Senegal crop this year has been almost an entire failure.—Proc. N. W. D. A. 1911, p. 89.

Sollmann, Torald, points out that acacia and other gums give a golden or brownish-yellow color on heating with sodium hydroxide solution but they do not reduce Fehling's solution even on prolonged heating.—Am. J. Pharm. 1911, v. 83, pp. 176-177.

Gehe & Co. (Handelsbericht, 1911, p. 81) report that good quality of white acacia has been quite scarce, while the inferior qualities have been plentiful.

Smith, Kline & French Co. (Analytical Report, 1911, p. 5) reports on 14 samples of acacia. Two were slightly dark in color. The ash content ranged from 2.5 to 2.75 per cent. See also Bull. Am. Pharm. Assoc. 1911, v. 6, p. 343.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 5) report that the ash yield from several samples of acacia after grinding varied between 2.23 and 2.89 per cent, averaging 2.53.

Linke, H., states that commercial acacia usually contains about one half the ash content permitted by the Ph. Germ. V, not to exceed 5 per cent.—Ber. pharm. Gesellsch. 1911, v. 21, p. 191.

Turlot, J. G., contributes a note on mucilage of acacia, notes the substances incompatible therewith when prepared by the cold process, calls attention to the requirements of the Ph. Helv., and asserts that it is sufficient to heat the mucilage over the direct flame not exceeding a temperature of 100° for a period of 5 minutes, then filter through paper as with sirups.—J. Pharm. Anvers, 1911, v. 67, p. 604.

The Committee of Reference in Pharmacy (Third Report, p. 10) recommends that the mucilage be required to be freshly prepared; it

is not advisable to add any preservative. See also *Pharm. J.* 1911, v. 87, p. 591.

An unsigned article (*Pharm. Ztg.* 1911, v. 56, p. 117) calls attention to a purified gum arabic in the form of scales that may be used for the extemporaneous preparation of mucilage of acacia.

Peckham, Roy A., reports that the sirup of acacia examined varied in density, odor, and acidity. In some cases a marked fermentation had taken place within an hour after the sirup was obtained.—*Apothecary*, June, 1911, v. 23, p. 16.

Rocques and Sellier outline a method for the estimation of acacia in sirups.—*Répert. pharm.* 1911, v. 23, pp. 444–446.

Lascoff, J. Leon, presents a communication on acacia and its use as an aid in dispensing.—*Apothecary*, March, 1911, v. 23, p. 19. See also *Am. Druggist*, 1911, v. 58, pp. 67–68.

Erhardt, E., reports observations on the action of mucilaginous additions in lumbar anesthesia.—*Arch. internat. pharmacod. et therap.* 1911, v. 21, pp. 213–225. See also pp. 227–242.

ACETANILIDUM.

Düsterbehn, F., points out that the Ph. Germ. V gives the solubility of acetanilide in boiling water as 1:22, in alcohol at 15° as 1:4 and adds the statement that acetanilide is less soluble in chloroform than in ether. The latter statement has been questioned by Schneider and others.—*Apoth.-Ztg.* 1911, v. 26, p. 114. See also *Pharm. Ztg.* 1911, v. 56, p. 17.

Kahn, Joseph, outlines the chemistry of acetanilide and calls attention to its relation to methyl acetanilide and to acetphenetidinum.—*Proc. New York Pharm. Assoc.* 1911, p. 66.

Watson, G. N., outlines a delicate test for acetanilide. The latter substance when heated together with boric acid over a naked flame until the boric acid melts produces a yellow residue having a peculiar fragrant odor, suggestive of sweet clover or arbutus.—*Am. J. Pharm.* 1911, v. 83, pp. 269–270. See also *Drug. Circ.* 1911, v. 55, p. 260.

Emery, W. O., in the referee report on headache mixtures, outlines a method for determining acetanilide.—*Proc. Assoc. Off. Agric. Chem.* 1911, 28th Ann. Conv., pp. 236–241. (*Bull. Bur. Chem. U. S. Dept. Agric.* 1912, No. 152.)

Buckner, J. C., outlines some of the modifications in the tests for acetanilide, phenacetin, and antipyrine, that he has found to be advantageous.—*Proc. Texas Pharm. Assoc.* 1911, pp. 110–113. Also *Southern Pharm. J.* 1910–1911, v. 3, p. 476.

An editorial (*Lancet*, 1911, v. 181, p. 777) states that there are probably few powerful drugs which are consumed more widely and indiscriminately than the coal-tar analgesics, judging from the number of quack remedies which contain one or more members of this group of substances.

Gordinier, H. C., points out that chronic acetanilide poisoning is productive of a perfectly definite and easily recognized symptom complex.—*J. Am. M. Assoc.* 1911, v. 56, p. 1677. See also *Boston M. & S. J.* 1911, v. 165, pp. 198–204.

Hommell, Philemon E., asserts that the use of acetanilide and acetphenetidin is steadily on the increase for the relief of migraine, grippe, and neuralgic conditions.—*Proc. New Jersey Pharm. Assoc.* 1911, p. 68. Also *Pract. Drug.* 1911, v. 29, July, p. 28.

An unsigned abstract (*Hom. Envoy*) states that headache powders (acetanilide), or tablets, may give you quick relief, but it is at the expense of the heart.—*J. Am. Inst. Homœop.* 1911, v. 3, p. 1037.

Piccinini, Guido M., discusses the variations in the viscosity and cryoscopy of the blood following the use of antipyrine, phenacetin, and antifebrin.—*Arch. farmacol. Sper.* 1911, v. 12, pp. 193–209.

An editorial (*New Idea*, 1911, v. 33, pp. 33–34) states that an eminent physician recently made the statement that if he were compelled to confine himself to the use of a single remedy for the relief of human suffering he would choose morphine, and if this were denied him he would select acetanilide.

ACETONUM.

Wiley, H. W., reports acetone as having been rejected because it was yellow in color and contained organic and nonvolatile matter.—*Ann. Rep. U. S. Dept. Agric.* 1911, 1912, p. 437. See also p. 435.

Zerner, Ernst, discusses the ethylating of acetone.—*Monatsh. Chem.* 1911, v. 32, pp. 677–686.

Roshdestwensky and Lewis discuss the electrochemistry of solutions in acetone.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 2138–2147.

Samuels, A., contributes a brief paper on acetone in inoperable cancer of the uterus; it checks hæmorrhages otherwise uncontrollable, and lessens discharges.—*N. York M. J.* 1911, v. 93, pp. 1088–1090.

Gellhorn, G. (*Zentralbl. Gynäkol.* v. 35, No. 35), describes a modification of his technique in the treatment of inoperable cancer with acetone.—*J. Am. M. Assoc.* 1911, v. 57, p. 1249.

ACETPHENETIDINUM.

Düsterbehn, F., in a review of the *Ph. Germ. V.*, points out that the solubility of phenacetin in boiling water is now given as 1:80.—*Apoth. Ztg.* 1911, v. 26, p. 241.

The Committee of Reference in Pharmacy (Third Report, p. 22) recommends that the solubility of phenacetinum in 90 per cent alcohol be corrected to 1 in 21. See also *Pharm. J.* 1911, v. 87, p. 709.

Kahn, Joseph, discusses the chemistry of acetphenetidin, and points out its relation to acetanilide, lactophenin, and other aniline derivatives.—*Proc. New York Pharm. Assoc.* 1911, p. 67.

Emery, W. O., in the referee report on headache mixtures, outlines a method for determining acetphenetidin.—Proc. Assoc. Off. Agric. Chem. 1911, 28th Ann. Conv. pp. 236–241 (Bull. Bur. Chem. U. S. Dept. Agric. 1912, No. 152).

Buckner, J. C., has not found the chromium trioxide test for phenacetin very successful. He outlines a modification of the pharmacopœial test.—Southern Pharm. J. 1910–11, v. 3, p. 476. See also Proc. Texas Pharm. Assoc. 1911, p. 110–113.

Whitney, D. V., reports a sample of phenacetin purchased with guarantee label, which contained a considerable quantity of acetanilide.—Proc. Missouri Pharm. Assoc. 1911, p. 96.

Smith, Kline & French Co. (Analytical Report, 1911, p. 5) reports on 11 samples of acetphenetidin. One was of unsatisfactory appearance and was rejected.

Brown, Lucius P., announces that, under the amended Food and Drugs Law of Tennessee, acetphenetidin when present in pharmaceutical preparations should be declared by that name and not as phenacetin or by any other synonym.—Proc. Tennessee Pharm. Assoc. 1911, p. 90.

Hommell, Philemon E., asserts that the use of acetanilide and acetphenetidin is steadily on the increase for the relief of migraine, grippe, and neuralgic conditions.—Proc. New Jersey Pharm. Assoc. 1911, p. 68.

Welsford, A. G., reports the case of a patient who took 72 grains of phenacetin within an hour; recovery.—Brit. M. J. 1911, v. 1, p. 1313.

Piccinini, Guido M., discusses the variations in the viscosity and cryoscopy of the blood following the use of antipyrine, phenacetin, and antifebrin.—Arch. farmacol. Sper. 1911, v. 12, pp. 193–209.

Riedel's Berichte (1911, p. 103) quotes G. Treupel, who recommends the use of phenacetin in the treatment of acute and subacute articular rheumatism.

ACIDUM ACETICUM.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 1) proposes that dilute acetic acid shall contain 5 per cent by weight of hydrogen acetate, $\text{HC}_2\text{H}_3\text{O}_4$; the same strength as the Ph. Helv., and only slightly weaker than that of the Ph. Germ. and the U. S. P. VIII. The Pharmaceutical Journal (1911, v. 87, p. 431) adds that not much would be gained in the way of international uniformity.

Brown, Linwood A., states that acetic acid is found on the market of practically any strength desired, the main ones being 6 per cent, the so-called No. 8 acid consisting of 28–30 per cent of acetic acid, 36, 60, 96, 99 and 99.5 per cent acids. A great many druggists have the No. 8 acid in stock, due, doubtless, either to a trade custom of the

jobber, or to ignorance on the druggists' part.—Proc. Kentucky Pharm. Assoc. 1911, p. 91.

Orton, Edwards and King report observations on the purification of acetic acid.—J. Chem. Soc. Lond. 1911, v. 99, pp. 1178–1185.

Bousfield and Lowry report observations on the purification and properties of acetic acid.—*Ibid.* pp. 1432–1441.

Edwards and Orton outline a method for the detection and estimation of small quantities of acetic anhydride in acetic acid.—*Ibid.* pp. 1181–1185.

Smith, Kline & French Co. (Analytical Report, 1911, p. 5) reports on 37 samples of acetic acid. One sample contained an excessive amount of fixed impurities, heavy metals, and responded to tests for the presence of formic or sulphuric acid. Two other lots were rejected on account of their objectionable color. One sample was a trifle low in strength.

Sayre, L. E., found 3 samples of acetic acid to be below standard or adulterated.—Bull. Kansas Bd. Health, 1911, v. 7, p. 175.

Army, H. V., reports on 15 samples of acetic acid; 12 samples were up to pharmacopœial requirements, 1 was above strength (47 per cent), the other two were 28 and 29 per cent respectively.—Proc. Ohio Pharm. Assoc. 1911, p. 126.

Brown, L. A., reports examining a sample of acetic acid, which was found to be 76.4 per cent of U. S. P. strength.—Bull. Kentucky Agric. Exper. Sta. 1911, Oct. pp. 25–33.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, notes a difference in strength amounting to 20 per cent in acetic acid.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 232. Also J. Pharm. Anvers, 1911, v. 67, p. 520.

Rabe, R. P., states that acetic acid is indicated in cases of anæmia, dropsy, gastric disturbance, great thirst.—Hahnemann. Month. 1911, v. 46, p. 398.

ACIDUM ACETICUM GLACIALE.

Düsterbehn, F., points out that the Ph. Germ. V now requires a solidification point not under $+9.5^{\circ}$ for the official acetic acid. Water-free acetic acid solidifies at $+16.7^{\circ}$ and with an increase of the water content the solidification point reaches a minimum of -27° , corresponding to a water content of about 40 per cent, or two molecules.—Apoth.-Ztg. 1911, v. 26, p. 114. See also Pharm. J. 1911, v. 86, p. 496.

Linke, H., expresses the belief that the determination of the congealing point of acetic acid [glacial] is a more practical requirement than the former melting point determination, although it is at times necessary to apply ice or some other method of cooling.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 179–180.

The French Syndicate of Wholesale Druggists suggests that the standard for acetic acid be made 98 per cent pure acid.—Pharm. J. 1911, v. 86, p. 860.

The Paris Pharmaceutical Society suggests a slight modification of the official assay method and a reduction in strength to 98 per cent.—J. Pharm. et Chim. 1911, v. 4, p. 433.

Behrens, J. (Eng. Pat. 28,839, Dec. 12, 1910), describes a process for manufacturing concentrated acetic acid.—J. Soc. Chem. Ind. 1911, v. 30, p. 746.

Bachman, Gustav, reports that the sample of glacial acetic acid examined by him contained 73.1 per cent of absolute $\text{HC}_2\text{H}_3\text{O}_2$.—Proc. Minnesota Pharm. Assoc. 1911, p. 101.

Wijnne, A. J., reports that 3 samples of acetic acid examined by him contained from 90.6 to 92.5 per cent of acetic acid, in place of a minimum of 97.2, required by the Ph. Ndl. IV.—Pharm. Weekblad, 1911, v. 48, p. 131.

ACID, ACETYLSALICYLIC.

An editorial (Pharm. Ztg. 1911, v. 56, p. 572) points out that the Ph. Germ. V includes aspirin as a synonym for acidum acetylosalicylicum.

Düsterbehn, F., in commenting on the Ph. Germ. V description for acetylosalicylic acid, points out that the product is made from salicylic acid or sodium salicylate by treating with acetyl chloride. It is only slightly soluble in cold water, and soluble in about 100 parts of water at 37°. The melting point is given as about 135°.—Apoth.-Ztg. 1911, v. 26, p. 114. Also Pharm. J. 1911, v. 86, p. 496.

Gehe & Co. (Handelsbericht, 1911, p. 113), in commenting on the Ph. Germ. V requirements for acetylsalicylic acid, state that it would have been more desirable to require that the melting point be not below 135°, as the melting point of an absolutely pure salicylic acid is 137°, and many of the less pure commercial products melt at 133°.

Bissell, W. B., suggests the addition of acetylsalicylic acid to the U. S. P.—Proc. New York Pharm. Assoc. 1911, p. 91.

Raubenheimer, Otto, does not think that the suggestion to admit acetylsalicylic acid into the U. S. P. can be made use of.—*Ibid.* p. 94.

Linke, H., reports some observations on acetylsalicylic acid of varying origin, points out that practically all samples contain some free salicylic acid, and that the Ph. Germ. V tests for purity are quite sufficient to insure a product of uniformly high grade.—Therap. Monatsh. 1911, v. 25, pp. 664–667. Also Ber. pharm. Gesellsch. 1911, v. 21, pp. 180–181.

For a controversy by Seel and Friederich and Linke, on the occurrence of free salicylic acid in aspirin tablets.—Pharm. Zentralh.

1911, v. 40, pp. 1055-1062. Also Apoth.-Ztg. 1911, v. 26, pp. 939-940, 986, and 994.

Linke, H., points out that a melting point of 135° for acetylsalicylic acid is attained only when the substance is rapidly heated to avoid decomposition.—Ber. pharm. Gesellsch. 1911, v. 21, p. 282.

Schneider, A., discusses the method of making acetylsalicylic acid and the several tests proposed from time to time.—Pharm. Zentralh. 1911, v. 52, pp. 17-18. See also Pharm. Ztg. 1911, v. 56, p. 545.

An unsigned article (N. A. R. D., Notes 1911-1912, v. 13, p. 734) calls attention to a suit, or a number of suits, brought by the Farbenfabriken of Elberfeld Co., of New York City, against a retail druggist in San Francisco for infringement of their aspirin patent.

A news note (Oil, Paint, and Drug Reporter, 1911, v. 80, August 28, p. 37) quotes from a report on the comparative prices of acetylsalicylic acid and aspirin in Paris and London.

Brown, Alexander, reports a case showing the toxic effects of aspirin.—Lancet, 1911, v. 181, p. 761. See also pp. 916, 970, 1094.

Abercombie, Peter H., reports toxic symptoms after he had taken 3 doses of 5 grains each of aspirin and similar symptoms in a patient who had taken but 5 grains.—Brit. M. J. 1911, v. 1, p. 1314.

Macht, David L., reports a case of repeated aspirin poisoning and points out that this drug is not devoid of toxic action.—Med. Rec. 1911, v. 80, p. 826.

Gilbert, G. Burton, reports an unusual idiosyncrasy to aspirin.—J. Am. M. Assoc. 1911, v. 56, p. 1262.

Graham, Cyrus, reports a case of acute intoxication following the ingestion of two five-grain tablets of aspirin.—*Ibid.* p. 261-262.

The Bayer Co. Ltd. asserts that the recently reported untoward results following the use of aspirin may be safely ascribed to an idiosyncrasy to salicylic acid in whatever form it may be presented. They suggest that it never be given on an empty stomach nor with alkalis nor alkaline mineral waters.—Pharm. J. 1911, v. 86, p. 643.

Payne, Arthur, calls attention to some of the therapeutic uses of acetylsalicylic acid in canine practice.—Vet. J. 1911, v. 67, pp. 176-178.

ACIDUM BENZOICUM.

Beringer, George M., points out that the Ph. Germ. V recognizes benzoic acid sublimed from Siam benzoin and gives tests to detect the synthetic product.—Proc. New Jersey Pharm. Assoc. 1911, p. 80.

Folin and Flanders discuss the determination of benzoic acid and outline a method of procedure.—J. Am. Chem. Soc. 1911, v. 33, pp. 1622-1626.

Remy, Eduard, discusses the quantitative determination of benzoic acid, outlines the method proposed by H. Reed, and reports, in the form of a table, a number of results obtained by him.—*Apoth.-Ztg.* 1911, v. 26, pp. 835–837.

Lehmann, K. B., reviews some of the recent literature relating to the determination of the preserving properties of benzoic acid.—*Chem. Ztg.* 1911, v. 35, pp. 1297–1299, 1314–1317.

The Berlin Correspondent (*J. Am. M. Assoc.* 1911, v. 56, p. 1493) calls attention to the report of the Prussian board of experts regarding the permissibility of the use of benzoic acid and its salts for the preservation of foods.

Fischer and Gruenert report observations on the influence of benzoic acid and other preservatives on the keeping qualities and composition of butter and margarine.—*Ztschr. Unters. Nahr. Genussm.* 1911, v. 22, pp. 553–582.

Marchadier considers the use of benzoic acid as a preservative of butter.—*Ann. falsif.* 1911, v. 4, p. 28.

Serger, H., reviews some of the literature relating to the utilization of benzoic acid as a chemical preservative.—*Chem. Ztg.* 1911, v. 35, pp. 1194–1195. Also *Pharm. Zentralh.* 1911, v. 52, pp. 1109–1111.

Friese, Walther, discusses the detection of benzoic acid in margarine, butter, and other fats.—*Pharm. Zentralh.* 1911, v. 52, pp. 1201–1203.

Polenske, Ed., discusses the detection of benzoic acid in foods.—*Arb. k. Gsndhtsamte*, 1911, v. 38, pp. 149–154.

Jones, Eli G., gives benzoic acid, 3d x when he can smell urine in the patient's clothes.—*J. Therap. & Diet.* 1911, v. 5, p. 138.

ACIDUM BORICUM.

Düsterbehn, F., notes that the *Ph. Germ. V* states that, on heating boric acid to about 70°, metaboric acid, HBO_2 , is formed; but that in reality this change does not take place below 100° to 105°. On heating above 140° to 160° it is gradually changed to pyro- or tetraboric acid, $\text{H}_2\text{B}_4\text{O}_7$, and at a red heat finally changes to boric anhydride B_2O_3 . The solubility in alcohol at 15° is given as 1:25.—*Apoth.-Ztg.* 1911, v. 26, p. 115.

Biltz and Marcus report observations on the distribution of borates in potash deposits.—*Ztschr. anorg. Chem.* 1911, v. 72, pp. 302–312.

von Fellenberg, Th., discusses the detection of boric acid by the flame test.—*Schweiz. Wehnschr. Chem. u. Pharm.* 1911, v. 49, p. 64.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 17) report the examination of 114 samples. All except two contained 5 parts per million of arsenic or less, these only reaching 6 parts. All contained below 0.001 per cent lead.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 34) report that they have had occasion to object to samples containing an excessive proportion of sulphates.

The Biennial Report of the Inspection of Pharmacies, 1909-1910, calls attention to boric acid contaminated by organic matters.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 232, and J. Pharm. d'Anvers, 1911, v. 67, p. 520.

An editorial note (Pharm. J. 1911, v. 86, p. 90) calls attention to a paper by William Duncan (*Ibid.* p. 104) on boric acid and glycerin. The reaction between the two is shown to be more complex than is usually supposed.

Serger, H., reviews some of the literature relating to the utilization of boric acid as a chemical preservative.—Chem. Ztg. 1911, v. 35, pp. 1166-1167.

Tankard, A. R., discussing purity of foods and drugs, states that boric acid may be present in our milk, cream, butter, prepared fish and meats, ham and bacon.—Pharm. J. 1911, v. 87, p. 5.

Tachau, Hermann, reports being able to demonstrate the presence of boron in the perspiration of a patient after the injection of one gramme of boric acid, and concludes that boric acid is eliminated in part through the skin.—Arch. exper. Path. u. Pharmacol. 1911, v. 66, p. 339.

An unsigned note (Pract. Drug. 1911, v. 29, March, p. 43) states that, in view of the fact that boric acid exists normally in most fruits in infinitesimal quantities, the French authorities will hereafter subject California dried fruits to a less stringent analysis.

ACIDUM CAMPHORICUM.

Düsterbehn, F., points out that the Ph. Germ. V gives the solubility of camphoric acid in water as 1:150 and in boiling water as 1:20. The optical rotation in alcoholic solutions is given as dextrorotatory.—Apoth.-Ztg. 1911, v. 26, p. 115. See also Pharm. J. 1911, v. 86, p. 496; and Pharm. Zentralh. 1911, v. 52, p. 19.

Blanc and Thorpe discuss Komppa's synthesis of camphoric acid.—J. Chem. Soc. Lond. 1911, v. 99, pp. 2010-2012.

Komppa, Gustav, replies to the criticisms by Blanc and Thorpe.—*Ibid.* pp. 29-33. Also Bull. Soc. chim. France, 1911, v. 9, pp. 49-56. Thorpe and Blanc reply, pp. 1068-1071.

ACIDUM CITRICUM.

Düsterbehn, F., notes that the Ph. Germ. V now states that citric acid begins to lose water of crystallization at 30°, that it is soluble in 0.6 parts of water, in 1.5 parts of alcohol, and in 50 parts of ether.—Apoth.-Ztg. 1911, v. 26, p. 124. See also Chem. & Drug. 1911, v. 78, p. 13.

Wiley, H. W., reports citric acid as having been rejected because it contained heavy metals.—Ann. Rep. U. S. Dept. Agric. 1911, 1912, p. 437.

Wijnne, A. J., reports that 1 sample of citric acid examined by him indicated the presence of a trace of a heavy metal.—Pharm. Weekblad 1911, v. 48, p. 131.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 21) report on 66 samples of citric acid. In only 3 cases did the ash exceed 0.03 per cent. Lead varied from 0.0001 to 0.0008 per cent, except in one sample, which reached 0.0016 per cent.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 35) report on one sample of citric acid containing no less than 80 parts per million of lead.

Hall and Bell report observations on the physical properties of aqueous solutions containing ammonia and citric acid.—J. Am. Chem. Soc. 1911, v. 33, pp. 711-718.

ACID, DIETHYLBARBITURIC.

An editorial (Pharm. Ztg. 1911, v. 56, p. 572) states that the Ph. Germ. V includes veronal as a synonym for acidum diethylbarbituricum.

Düsterbehn, F., notes that the Ph. Germ. V considers diethylbarbituric acid as diethylmalonylurea. It occurs as colorless, transparent, odorless, slightly bitter tasting crystals having a melting point of from 190° to 191°, and according to E. Schmidt being soluble in 170 parts of water at 15° and in 17 parts of boiling water. Other authorities give the solubility as 145 parts of cold and 12 parts of boiling water. It is readily soluble in alcohol, ether, chloroform, and solution of sodium hydroxide.—Apoth.-Ztg. 1911, v. 26, p. 124. See also Pharm. J. 1911, v. 86, p. 496.

Kahn, Joseph, in a paper on organic synthesis, discusses the chemistry of veronal and points out its relation to proponal.—Proc. New York Pharm. Assoc. 1911, p. 64.

Reuthe discusses the chemistry of the hypnotics, particularly of veronal, sulphonal, and trional.—Pharm. Ztg. 1911, v. 56, pp. 555-556.

Schneider, A., discusses the method of making diethylbarbituric acid and calls attention to the requirements and tests embodied in the Ph. Germ. V.—Pharm. Zentralh. 1911, v. 52, pp. 25-27, 51-52.

Linke, H., reports that commercial diethylbarbituric acid complies with the requirements of the Ph. Germ. V.—Ber. Pharm. Gesellsch. 1911, v. 21, p. 182.

An unsigned article (N. A. R. D. Notes 1911-1912, v. 13, p. 734) states that a number of suits have been brought for infringement of the veronal patent. The infringement consists in selling and dispensing malonal for veronal.

Jorissen, A., outlines a method for the identification of veronal.—*Pharm. Ztg.* 1911, v. 56, p. 454. See also *Ann. chim. analyt.* 1911, v. 16, pp. 370–373; and *J. Pharm. et Chim.*, 1911, v. 3, pp. 478–481.

Roemer and Jacoby report on the pharmacology of veronal.—*Arch. exper. Path. u. Pharmacol.* 1911, v. 66, pp. 241–260, 261–295, 296–312.

Gröber, A., discusses the pharmacodynamic and toxic action of veronal.—*Biochem. Ztschr.* 1911, v. 31, pp. 1–31.

Meyer, Max, discusses the use of veronal in gastrointestinal derangements.—*Merck's Arch.* 1911, v. 13, pp. 4–5.

v. Noorden, Carl, discusses the use of veronal and suggests the addition of small doses of codeine.—*Therap. Gegenw.* 1911, v. 52, p. 287.

Japhé, Fanny, quotes various authors on the habituation of the organism to veronal.—*Therap. Monatsh.* 1911, v. 25, p. 111.

Heiduschka, A., discusses the forensic detection of veronal and reports the findings in one case in which death evidently occurred after the larger portion of the veronal had been eliminated from the body.—*Arch. Pharm.* 1911, v. 249, p. 322.

Tunncliffe, F. W., states that veronal is as poisonous as chloral hydrate; the deaths from this product point to the necessity for the extension and revision of the Poisons Schedule.—*Chem. & Drug.* 1911, v. 78, p. 447.

An editorial (*Pharm. J.* 1911, v. 86, pp. 235–236) commenting on the deaths by poisoning in England and Wales in 1909, points out that veronal was responsible for 13 deaths—11 accidental and 2 suicides.

An unsigned abstract (*Hom. World*) states that so many cases of fatal poisoning by veronal have lately come to notice that it is obvious that this drug should be taken only under medical advice.—*J. Am. Inst. Homœop.* 1911, v. 3, p. 81.

Additional references on the chemistry, toxicology, and uses of veronal will be found in *Index Medicus*, *J. Am. M. Assoc.*; *Chem. Abstr.*; and *Pharm. J.*

ACID, FORMIC.

Düsterbehn, F., notes that the *Ph. Germ. V* gives the specific gravity of formic acid as from 1.061 to 1.064. The formic acid content is required to be from 24 to 25 per cent.—*Apoth.-Ztg.* 1911, v. 26, p. 124. See also *Pharm. J.* 1911, v. 86, p. 496; and *Pharm. Zentralh.* 1911, v. 52, p. 27.

Bacon, Raymond F., discusses the detection and determination of small quantities of ethyl and methyl alcohol and of formic acid.—*Chem. Eng.* 1911, v. 14, pp. 335–338.

Bognár, Gustav, reports observations on the mechanism of the influence of bromine on formic acid.—*Ztschr. physik. Chem.* 1910, v. 71, pp. 529–549.

Garner, Saxton, and Parker report a study of the properties of anhydrous formic acid, and outline the method employed in preparing it.—*Am. Chem. J.* 1911, v. 46, pp. 236–240.

Cross and Bevan discuss the interaction of formic acid and cellulose.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 1450–1456.

Serger, H., discusses the utilization of formic acid as a preservative.—*Chem. Ztg.* 1911, v. 35, pp. 1151–1152.

Fincke, Heinrich, discusses several methods for the determination of formic acid in food products.—*Ztschr. Unters. Nahr. u. Genussm.* 1911, v. 21, pp. 1–16, and v. 22, pp. 88–104.

Rabc, R. P., states that formic acid is indicated in cases of rheumatic pains wander about; sweat with no relief.—*Hahnemann. Month.* 1911, v. 46, p. 399.

ACIDUM GALLICUM.

Düsterbehn, F., points out that the Ph. Germ. V requires that gallic acid or 3.4.5-trioxybenzolcarboxylic acid-1 dissolve in 85 parts of water at 15°, 6 parts of alcohol, or 12 parts of glycerin.—*Apoth.-Ztg.* 1911, v. 26, p. 124. See also *Pharm. J.* 1911, v. 86, p. 496.

Schneider, A., discusses the method of making gallic acid and points out that this preparation should be kept protected from light and air containing ammonia.—*Pharm. Zentralh.* 1911, v. 52, p. 124.

Weinstein, Joseph, reports on 5 samples of gallic acid; 3 conformed with the U. S. P. standard; 2 contained tannin.—*Proc. New York Pharm. Assoc.* 1911, p. 150.

ACIDUM HYDROBROMICUM DILUTUM.

Smith, Kline & French Co. (Analytical Report, 1911, p. 6) reports on 4 samples of dilute hydrobromic acid; 1 sample contained an abnormal amount of sulphates.

ACIDUM HYDROCHLORICUM.

Düsterbehn, F., states that the Ph. Germ. V now requires from 24.8 to 25.6 per cent of absolute hydrochloric acid. The specific gravity is given as from 1.126 to 1.127.—*Apoth.-Ztg.* 1911, v. 26, p. 124. See also *Pharm. J.* 1911, v. 86, p. 496.

Hoppe, E. (Fr. Pat. 418,731, July 27, 1910), describes a process for the preparation of hydrochloric or hydrobromic acid with chlorine or bromine respectively.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 84.

Reusch, K., reviews some of the recent literature relating to the production of hydrochloric acid.—*Chem. Ztg.* 1911, v. 35, p. 307.

Schütz, E., discusses the production of chemically pure hydrochloric acid.—*Ztschr. ang. Chem.* 1911, v. 24, pp. 489–490. See also *Chem. Eng.* 1911, v. 14, pp. 461–462.

Wiley, H. W., reports hydrochloric acid as having been rejected because it was low in acidity.—Ann. Rep. U. S. Dept. Agric. 1911, 1912, p. 437.

The Paris Pharmaceutical Society suggests an iron limit test for hydrochloric acid.—J. Pharm. et Chim. 1911, v. 4, p. 437.

Bray and Hunt report observations on the conductance of aqueous solutions of sodium chloride, hydrochloric acids, and their mixtures.—J. Am. Chem. Soc. 1911, v. 33, pp. 781-795.

Partington, James Riddick, reports observations on the temperature coefficient of the electrical conductivity of hydrogen chloride in alcoholic solution.—J. Chem. Soc. Lond. 1911, v. 99, pp. 1937-1941.

Smith, Kline & French Co. (Analytical Report, 1911, p. 6) reports on 19 samples of hydrochloric acid; 3 samples contained free bromine or chlorine. The strength of the samples varied from 33.4 to 37.45 per cent.

Wijnne, A. J., reports that 2 samples of hydrochloric acid, examined by him, contained 25.7 and 27 per cent of HCl; both exceeded the Ph. Ndl. IV requirement of 25 per cent.—Pharm. Weekblad, 1911, v. 48, p. 131.

Brown, Linwood A., notes that hydrochloric acid is furnished in almost any strength and degree of purity desired. It may be obtained in 39-40 per cent, 32, 25, and 33 per cent crude acid, and 10 per cent acid. The official strength, 31.9 per cent, is seldom used except in medicine; therefore druggists should be careful to specify the U. S. P. strength.—Proc. Kentucky Pharm. Assoc. 1911, p. 91.

Düsterbehn, F., points out that the diluted hydrochloric acid of the Ph. Germ. V is required to contain from 12.4 to 12.6 per cent of hydrochloric acid.—Apoth.-Ztg. 1911, v. 26, p. 124.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 1) recommends that dilute hydrochloric acid contain 10 per cent by weight of HCl. It would then be uniform with that of the Ph. Helv. and the U. S. P.

The Pharmaceutical Journal (1911, v. 87, p. 431) adds that it would also be in agreement with the Ph. Fr., Ph. Hung., Ph. Japon., Ph. Dan., Ph. Norv., and the Ph. Svec.

Cook, Alfred N., states that some of the dilute hydrochloric acid examined is much further from standard than it ought to be.—Bull. South Dakota Food & Drug Dept. 1911, No. 23, p. 2.

Heeve, William L., gives hydrochloric acid in chronic diarrhoea, when the tongue is red, dry, pointed tip, with pointed papillæ and mucous membranes deeply injected.—Nat. Eclect. M. Assoc. Quart. 1910-1911, v. 2, p. 121.

Boger, C. M. (Med. Advance) states that muriatic acid is a powerful and deep acting drug whose symptoms usually come on slowly and in muscular weakness; this is held to be its main indicator.—J. Am. Inst. Homœop. 1911, v. 3, p. 327.

ACIDUM HYDROCYANICUM DILUTUM.

Liebknecht, O. (U. S. Pat. 967,943, Aug. 23, 1910) describes a process for the making of hydrocyanic acid.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 209. See also pp. 26 and 86.

Rosenthaler, L., discusses the hydrargyrometric estimation of hydrocyanic acid and of cyanides.—*Arch. Pharm.* 1911, v. 249, pp. 255–256.

Turlot, J. G., contributes a note on the estimation of hydrocyanic acid in plants.—*J. Pharm. Anvers*, 1911, v. 67, p. 165.

Schimmel & Co. (Semi-Annual Report, April, 1911, pp. 161–162) quote Greshoff and reprint his list of plants in which hydrocyanic acid occurs.

Lander and Walden outline a method for the detection of traces of hydrogen cyanide.—*Chem. & Drug.* 1911, v. 78, p. 674. See also *Analyst*, 1911, v. 36, pp. 266–270.

Wirth, P. H., reports some observations on the determination of hydrocyanic acid and benzaldehyde in aqueous solutions.—*Pharm. Weekblad*, 1911, v. 48, pp. 1049–1055, 1065–1078.

Bernegau, L. H., reports that 8 samples of dilute hydrocyanic acid tested from 2.075 to 2.34 per cent absolute HCN. He asks what is meant by the U. S. P. requirement of “not less than 2 per cent,” and how much in excess of 2 per cent is allowable.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 124.

Sayre, L. E., found a sample of diluted hydrocyanic acid to contain only a trace of the active constituent.—*Bull. Kansas Bd. Health*, 1911, v. 7, p. 175.

Warburg, Otto, discusses the inhibition of hydrocyanic acid action in living cells.—*Ztschr. physiol. Chem.* 1911–12, v. 76, pp. 331–346.

Grove and Loevenhart report some observations on the action of hydrocyanic acid on the respiration and the antagonistic action of sodium iodosobenzoate.—*J. Pharmacol. & Exper. Therap.* 1911–1912, v. 3, pp. 131–141.

An unsigned abstract (*Ind. Hom. Rep.*) states that hydrocyanic acid is given in hiccuph when other remedies fail to do any good.—*J. Am. Inst. Homœop.* 1911, v. 3, p. 77.

ACIDUM HYPOPHOSPHOROSUM.

Feist, K., discusses the estimation of hypophosphorus acid in medicinal compounds.—*Apoth.-Ztg.* 1911, v. 26, pp. 253–254.

Smith, Kline & French Co. (Analytical Report, 1911, p. 6) reports on 6 samples of hypophosphorous acid, ranging in strength from 37.5 to 58.9 per cent.

ACIDUM LACTICUM.

Düsterbehn, F., notes that the *Ph. Germ. V* now describes lactic acid as being hygroscopic; 100 parts of the official acid should contain

approximately 75 parts of pure lactic acid.—Apoth.-Ztg. 1911, v. 26, p. 124. See also Pharm. J. 1911, v. 86, p. 497.

Landau, Marc, asserts that the ultra-violet rays are capable of producing profound transformations in the lactic acid molecule.—Compt. rend. Acad. sc. 1911, v. 152, p. 1308.

Besson, A. A., presents a contribution to our knowledge of lactic acid anhydride.—Chem. Ztg. 1911, v. 35, pp. 26–27.

Elvove, Elias, discusses the assay of lactic acid, and points out that the titration of lactic acid at the boiling temperature may lead to varying and at times low results and can be avoided by substituting a residual titration process.—Am. J. Pharm. 1911, v. 83, pp. 14–19.

E'We, Geo. E., expresses the belief that the U. S. P. method for the assay of lactic acid gives low results because it fails to provide for the presence of some 10 to 15 per cent of lactone anhydride. He points out that the Ph. Germ. method gives higher and more correlating results.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 310.

Herzog and Slansky present a contribution to the knowledge of the optically active modification of lactic acid.—Ztschr. physiol. Chem. 1911, v. 73, pp. 240–246.

Besson, A. A., discusses the analysis of lactic acid.—Chem. Ztg. 1911, v. 35, pp. 1209–1210.

Klapproth, W., comments on the above.—*Ibid.* p. 1409.

Currie, James N., reports a study of the optical forms of lactic acid produced by pure cultures of *Bacillus bulgaricus*.—J. Biol. Chem. 1911, v. 10, pp. 201–211.

Smith, Kline & French Co. (Analytical Report, 1911, p. 6) reports on 11 samples of lactic acid, 1 being slightly low in strength. The samples assayed from 74.3 to 80.6 per cent.

Rabe, R. P., states that lactic acid is indicated in cases of diabetes with nausea; relieved by eating.—Hahnemann. Month. 1911, v. 46, p. 399.

ACIDUM NITRICUM.

Düsterbehn, F., states that the Ph. Germ. V now permits a variation in the nitric acid content of the official preparation of from 24.8 to 25.2 per cent. The specific gravity is permitted to vary from 1.149 to 1.152.—Apoth.-Ztg. 1911, v. 26, p. 124.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 497) points out that a slight variation in the strength of nitric acid is now permitted, as in hydrochloric acid, but in this case the specific gravity has been reduced, not increased.

Little, Arthur D., states that, in 1785, Cavendish first described the production of nitric acid by the passage of an electric spark through air. A hundred years later Bradley and Lovejoy demonstrated the possibility of the commercial manufacture of nitrates from atmospheric air.—Drug Topics, 1911, v. 26, p. 293.

Franklin, Milton W., discusses the fixation of atmospheric nitrogen and presents a comparison of the commercial yield of the several processes employed.—Chem. Eng. 1911, v. 14, pp. 453-456.

Bühler, F. A., describes with illustrations the installation for the production of nitric acid at Notodden.—Chem. Ind. 1911, v. 34, pp. 210-212.

Reusch, K., reviews some of the recent literature relating to the production of nitric acid.—Chem. Ztg. 1911, v. 35, p. 308.

Richards, Joseph W., outlines the process used for making nitric acid from atmospheric nitrogen.—Sc. Am. Suppl. 1911, v. 71, p. 51.

Patents describing processes for the manufacture of nitric acid are recorded.—J. Soc. Chem. Ind. 1911, v. 30, pp. 84, 360, 684, 1115, 1381.

Monroe, Charles E., discusses the nitrogen question from the military standpoint, and calls attention to some of the many sources of supply of nitric acid.—Sc. Am. Suppl. 1911, v. 72, pp. 126-128.

Ehrlich and Russ report experiments to determine the nature of the nitrogen oxidation in electrical discharges in the presence of ozone.—Monatsh. Chem. 1911, v. 32, pp. 917-996.

Hölbling, V., reviews the progress made in the production of oxygen combinations of nitrogen, particularly nitric acid, nitrates, and nitrites.—Chem. Ind. 1911, v. 34, pp. 451-459.

Benrath, Alfred, reports observations on the oxidizing action of diluted nitric acid in sunlight.—J. prakt. Chem. 1911, v. 84, pp. 324-328.

Oddo and Anelli report some observations on the molecular weight and the constitutional formula of sulphuric acid and of nitric acid.—Chem. Ztg. 1911, v. 35, pp. 837-839, 846-847.

Romijn, G., outlines a new method for the determination of nitric acid.—Pharm. Weekblad, 1911, v. 48, pp. 753-757.

Drig and Sebellén report observations on the quantitative estimation of nitric acid in plants.—Chem. Ztg. 1911, v. 35, pp. 145-146.

Reynolds and Taylor discuss the decomposition of nitric acid by light.—Pharm. J. 1911, v. 87, p. 829.

Veley, V. H., presents a paper on the solution volumes of nitric acid.—Chem. News, 1911, v. 104, p. 309.

Chamot and Redfield, in a further study on the chief sources of error in the phenolsulphonic acid method for the determination of nitrates in water, outline a modified method.—J. Am. Chem. Soc. 1911, v. 33, pp. 381-384.

Withers and Ray discuss a modification of the diphenylamine test for nitrous and nitric acids.—*Ibid.*, pp. 708-711.

Lewis and Edgar report some experimental observations on the equilibrium between nitric acid, nitrous acid, and nitric oxide.—*Ibid.*, pp. 292-299.

Tillmans and Sutthoff outline a simple method for the detection and estimation of nitric acid and of nitrous acid in water.—*Ztschr. anal. Chem.* 1911, v. 50, pp. 473–495.

Schütz, E., discusses the production of chemically pure nitric acid.—*Ztschr. ang. Chem.* 1911, v. 24, pp. 490–491.

Romijn, G., outlines a new method for the estimation of nitric acid.—*Ztschr. anal. Chem.* 1911, v. 50, pp. 566–570.

Smith, Kline & French Co. (Analytical Report, 1911, p. 6) reports on 11 samples of nitric acid varying in strength from 68.2 to 72 per cent.

Wijnne, A. J., reports that 3 samples of nitric acid contained from 50.3 to 52.5 per cent of absolute nitric acid, in place of 50 per cent required by the Ph. Ndl. IV.—*Pharm. Weekblad*, 1911, v. 48, p. 131.

The Committee of Reference on Pharmacy (Third Report, Suppl. p. 1) recommends that dilute nitric acid contain 10 per cent by weight of hydrogen nitrate, HNO_3 ; it would then be uniform with the acid of the Ph. Helv. and the U. S. P.

The Pharmaceutical Journal (1911, v. 87, p. 431) adds that this would bring it into agreement as well with the Ph. Fr. and the Ph. Japon.

An unsigned article (*D.-A. Apoth.-Ztg.* 1911–12, v. 32, p. 120) calls attention to some of the precautions to be adopted in the handling of nitric acid.

Inskeep, J. E., states that if the tongue has a violet color, showing over red, nitric acid will cure whooping cough as it would cure ague, or any other disease with the same symptoms.—*Hahnemann Month.* 1911, v. 46, p. 236.

Additional references on the chemistry of nitric acid will be found in *Chem. Abstr.*; *Exper. Sta. Rec.*; *J. Soc. Chem. Ind.*; and *Chem. Centralbl.*

ACIDUM NITROHYDROCHLORICUM DILUTUM.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 1) states that the present method of making diluted nitrohydrochloric acid, viz, by mixing the dilute acids, should be adhered to, since it has been shown that the same change takes place as when the strong acids are first mixed and then diluted, and there is less liability to loss.

ACIDUM OLEICUM.

Holland, E. B., discusses the purification of insoluble fatty acids, distillation of the fatty acids in vacuo, crystallization from alcohol, and distillation of the ethyl esters in vacuo.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 171–173.

Vasterling, P., discusses the nature and examination of olein.—*Apoth.-Ztg.* 1911, v. 26, pp. 949–952.

Dieterich, K., calls attention to some additional data on the examination of oleic acid.—*Ibid.*, p. 961.

Smith, Kline & French Co. (Analytical Report, 1911, p. 7) reports that 11 samples of oleic acid became semi-solid under the conditions of U. S. P. test at from $+4^{\circ}$ to $+9^{\circ}$. The specific gravity varied from 0.891 to 0.895.

Schmincke, Alexander, reports observations on the behavior of erythrocytes in chronic oleic acid intoxications.—Arch. exper. Path. u. Pharmacol. 1910-11, v. 64, pp. 126-140.

ACIDUM PHOSPHORICUM.

Düsterbehn, F., states that the Ph. Germ. V requires a specific gravity of from 1.153 to 1.155 and permits of a trace of iron in phosphoric acid.—Apoth.-Ztg. 1911, v. 26, p. 124.

Holt and Myers, in a discussion on the phosphoric acids, conclude that pyrophosphoric acid is formed as an intermediate compound during the hydration of metaphosphoric acid and that the rate of hydration does not accord with any simple order of reaction.—J. Chem. Soc. Lond. 1911, v. 99, pp. 384-391.

Glücksman, C., discusses the titrimetric estimation of the official Ph. Austr. VIII phosphoric acid.—Pharm. Prax. 1911, v. 10, pp. 541-546.

Rosin, J., discusses the volumetric estimation of phosphoric acid by the silver nitrate method.—J. Am. Chem. Soc. 1911, v. 33, pp. 1099-1104.

Wagenaar, M., discusses the titration of phosphoric acid.—Pharm. Weekblad, 1911, v. 48, pp. 845-850.

Pouget and Chouchak outline a colorimetric method for the estimation of phosphoric acid.—Bull. Soc. chim. France, 1911, v. 9, p. 649.

v. Lorenz, N., discusses the estimation of phosphoric acid by direct weighing as the ammoniophosphomolybdate.—Oesterr. Chem.-Ztg. 1911, v. 14, pp. 1-5.

Jørgensen, Gunner, discusses the estimation of phosphoric acid and the criticisms by v. Lorenz of his previous communication.—Ztschr. ang. Chem. 1911, v. 24, pp. 542-544. See also Ztschr. anal. Chem. 1911, v. 50, pp. 337-343.

Wuyts, L., discusses the volumetric estimation of phosphoric acid soluble in 20 per cent citric acid.—Ann. chim. analyt. 1911, v. 16, pp. 134-137, 222, 306, 383.

Haskins and Patten present the referee report on the determination of phosphoric acid and review the work done on basic slag.—Proc. Assoc. Off. Agric. Chem. 1911, 28th Ann. Conv. pp. 10-25 (Bull. Bur. Chem. U. S. Dept. Agric. 1912, No. 152).

Neogi, Panchanan, in a study of orthophosphoric acid as a dehydrating catalytic agent, discusses the condensation of acetone in

presence of phosphoric acid.—J. Chem. Soc. Lond. 1911, v. 99, pp. 1249–1252.

Chassevant, A., makes certain recommendations to the French Council on Public Hygiene, with reference to the restriction of the use of orthophosphoric acid to exclusively medicinal uses.—Ann. falsif. 1911, v. 4, p. 540.

Prideaux, Edmund Brydges Rudhall, in a study on the alkaline phosphates, discusses the second and third dissociation constants of orthophosphoric acid.—J. Chem. Soc. Lond. 1911, v. 99, pp. 1224–1230.

Smith, Kline & French Co. (Analytical Report, 1911, p. 7) reports on 22 samples of phosphoric acid. All contained traces of sulphuric acid except 3 samples. Two were rejected because heavy metals were present in excess. One shipment was rejected on account of arsenic being present.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, states that the phosphoric acid of the old pharmacopœia was found, having a concentration of 50 per cent in place of 10 per cent.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 232, and J. Pharm. d'Anvers, 1911, v. 67, p. 520.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 1) recommends that dilute phosphoric acid contain 10 per cent by weight of hydrogen phosphate, H_2PO_4 ; it would then be uniform with that of the Ph. Helv. and the U. S. P. The assay should be by titration with alkali, as in the case of the latter.

The Pharmaceutical Journal (1911, v. 87, p. 431) adds that it would also be in accordance with the Ph. Fr., Ph. Japon., Ph. Svec., and Ph. Mex.

ACID, PICRIC.

Ehrenfried, Albert, contributes an historical retrospect of picric acid.—N. York M. J. 1911, v. 93, pp. 575–577.

Craig, Hugh, reports the fact that the shipping of picric acid is surrounded with rigid specifications and is unduly expensive.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 607.

Motolese, F. (Nouv. Remèd. June 24, 1911) discusses the pharmacological properties of picric acid.—Pharm. J. 1911, v. 87, p. 34.

Schamberg and Kolmer present a preliminary report on the treatment of the vaccination site with picric acid solutions, with which they have attained highly satisfactory results.—Lancet, 1911, v. 181, pp. 1397–1399. See also editorial, p. 1570.

Ehrenfried, Albert, concludes that the saturated aqueous solution of picric acid is incontestably superior to any other antiseptic surgical dressing at our disposal for the treatment of superficial wounds and lesions in which the rete Malpighii of the skin is not completely

destroyed, particularly in first and second degree burns.—J. Am. M. Assoc. 1911, v. 56, pp. 412–415.

Gibbs, John Philip, reports on the use of picric acid in the treatment of burns.—Ellingwood's Therap. 1911, v. 5, pp. 99–100.

ACIDUM SALICYLICUM.

Düsterbehn, F., points out that the Ph. Germ. V requires salicylic acid to occur as light needle-shaped crystals.—Apoth.-Ztg. 1911, v. 26, p. 125.

Linke, H., notes that in testing salicylic acid for organic impurities it is necessary to insure the absence of even traces of organic substances in the test tubes used.—Ber. pharm. Gesellsch. 1911, v. 21, p. 182.

Merrell, Charles G., presents a communication on salicylic acid, true, natural and synthetic; production, characteristics, and use.—Pract. Drug. 1911, v. 29, January, pp. 23–26.

Poulenc, Camille, reports a suggested correction in the test for chlorides.—J. Pharm. et Chim. 1911, v. 4, p. 542.

Whitney, D. V., reports a sample of salicylic acid purchased in bulk, with guarantee of jobber, that showed organic impurities (carbonizable) but otherwise was good.—Proc. Missouri Pharm. Assoc. 1911, p. 96.

Schott, F., presents a contribution on the colorimetric estimation of salicylic acid.—Ztschr. Unters. Nahr. u. Genussm. 1911, v. 22, p. 727.

McCrae, J., presents a brief note on Kobert's reagent as a test for salicylic acid.—Analyst, 1911, v. 36, p. 540.

Emery, W. O., in the referee report on headache mixtures, outlines a method for determining salicylic acid.—Proc. Assoc. Off. Agric. Chem. 1911, 28th Ann. Conv. pp. 236–241 (Bull. Bur. Chem. U. S. Dept. Agric. 1912, No. 152).

Wilkie, John M., discusses the action of iodine on phenols and its application to their volumetric determination.—J. Soc. Chem. Ind. 1911, v. 30, pp. 398–402.

In a supplemental paper, he outlines a sensitive test for the detection of phenol and salicylic acid.—*Ibid.* 402.

An unsigned review of volume 1 of Ernest J. Parry's work on Food and Drugs (Brit. & Col. Drug. 1911, v. 60, p. 471) points out that Seidell's method for the determination of salicylic acid as the dibromide gives excellent results, although experience shows that they are only within 2.5 per cent of the truth.

Linke, H., reports some observations on the constancy and sensitiveness of the iron chloride salicylic acid reaction and its application to the quantitative estimation of free salicylic acid.—Apoth.-Ztg. 1911, v. 26, pp. 1083–1085.

Sherman and Gross discuss the detection of salicylic acid, and point out that the formation of a violet color with ferric chloride is a reaction by no means confined to salicylic acid. They discuss the use of Millon's reagent.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 492-493.

Langkopf, O., discusses the detection of salicylic acid and calls attention to a number of substances that inhibit the occurrence of the color reaction of ferric chloride.—*Apoth.-Ztg.* 1911, v. 26, p. 1057.

Tankard, A. R., in a discussion of the purity of foods and drugs, states that salicylic acid is employed in jams and cordials.—*Pharm. J.* 1911, v. 87, p. 5.

Cohn, Robert, states that since the discontinuance of the use of salicylic acid as a preservative for fruit juices, formic and hydrofluoric acids have come into use quite extensively for this purpose.—*Ztschr. öffentl. Chem.* 1911, v. 17, pp. 2-12.

Serger, H., reviews some of the literature relating to the utilization of salicylic acid as a chemical preservative.—*Chem. Ztg.* 1911, v. 35, pp. 1166-1167.

Vierhout, P., discusses the quantitative estimation of salicylic acid in fruit juices.—*Ztschr. Unters. Nahr. u. Genussm.* 1911, v. 21, pp. 664-666.

Saltet and Zeehandelaar report some observations on the influence of formaldehyde and salicylic acid on the formation of botulinus toxins.—*Pharm. Weekblad*, 1911, v. 48, pp. 1337-1340.

Tachau, Hermann, reports finding salicylic acid in the perspiration of patients taking sodium salicylate.—*Arch. exper. Path. u. Pharmacol.* 1911, v. 66, p. 340.

Armstrong and Goodman report that salicylic acid is excreted in the sputum, if at all, in such small quantities as to make it useless in the diagnosis of pulmonary conditions.—*J. Am. M. Assoc.* 1911, v. 56, p. 1553.

Lambert, Alexander, discusses the use of salicylates in the treatment of rheumatism, and points out the need for adapting the form of salicylate to the patient.—*Tr. Am. M. Assoc. Sec. Pharm. & Therap.* 1911, pp. 78-85.

Wood, Horatio C., jr., in an article on the possibility of intestinal antiseptics, calls attention to the evident limitations of the use of salicylic acid as an intestinal antiseptic.—*Therap. Gaz.* 1911, v. 35, pp. 153-156.

Dixon, W. E., asserts that salicylic acid combines in the body with glyocoll, and this renders it inactive; the resulting salicyluric acid is almost nontoxic, and patients suffering from acute rheumatism treated with this body derive no benefit.—*Pharm. J.* 1911, v. 87, p. 16.

Kirkland says that salicylic acid is "just the thing" in acidity of the stomach.—*Eclectic M. J.* 1911, v. 71, p. 104.

Additional references on the chemistry and pharmacology of salicylic acid will be found in Zentralbl. Biochem. u. Biophysik, Chem. Abstr., Index Med., and J. Am. M. Assoc.

ACIDUM STEARICUM.

Holland, E. B., discusses the purification of insoluble fatty acids, distillation of the fatty acids *in vacuo*, crystallization from alcohol, and distillation of the ethyl esters *in vacuo*.—J. Ind. & Eng. Chem. 1911, v. 3, pp. 171–173.

Knorr, Franz, describes the stearinometer, an apparatus for the estimation of the stearin content of candles.—Oesterr. Chem.-Ztg. 1911, v. 14, pp. 100–101.

Smith, Kline & French Co. (Analytical Report, 1911, p. 7) reports on 14 samples of stearic acid. Eight samples were of U. S. P. quality, 4 samples were 1° below; two were 2° below the lowest U. S. P. melting point allowed. All had a distinct odor, making them objectionable for certain manufacturing purposes. The melting points ranged from 54° to 58.5°.

ACIDUM SULPHURICUM.

Düsterbehn, F., states that the specific gravity of sulphuric acid according to the Ph. Germ. V may vary from 1.836 to 1.841, the latter corresponding to a sulphuric acid content of 98.20 per cent.—Apoth.-Ztg. 1911, v. 26, p. 125.

Hölbling, V., reviews the progress made in the production of sulphuric acid and sulphuric acid anhydride.—Chem. Ind. 1911, v. 34, pp. 443–451.

Buraczewski and Abijewski report observations on the phenomenon of "blue acid" in the production of sulphuric acid.—Oesterr. Chem.-Ztg. 1911, v. 14, pp. 235–236.

Oddo, G., presents a paper on the employment of sulphide ore in the preparation of sulphuric acid.—Monit. Scientif. 1911, v. 72, pp. 734–739.

Wentski, O., presents some further comments on the theory of the lead chamber process.—Ztschr. ang. Chem. 1911, v. 24, pp. 392–400.

Scandola, E., commenting on the theory of the lead chamber process as promulgated by Wentski, claims precedence.—*Ibid.*, pp. 160–161.

Hartmann, E., describes and illustrates the Opl tower system for the production of sulphuric acid, 60° Bé. *Ibid.* pp. 2302–2305.

Petersen, Hugo, presents some critical observations on the production of sulphuric acid on a large scale.—*Ibid.* pp. 877–881. See also Chem. Ztg. 1911, v. 35, pp. 493–494.

Raschig, F., discusses the chemistry of the lead chamber process.—J. Soc. Chem. Ind. 1911, v. 30, pp. 166–174.

Divers, Edward, discusses a modification of Raschig's theory of the lead chamber process.—*Ibid.* pp. 594–603, 727. See also *Pharm. J.* 1911, v. 86, p. 595.

Norton, Thomas H., reports on the improved sulphuric acid chambers, Moritz system, installed by the Union Fabrik Chemischer Produkte at Kratzwieck, near Stettin.—*Cons. & Tr. Rep.* October 16, 1911, pp. 257–261.

Reusch, K., reviews some of the recent literature relating to the production of sulphuric acid.—*Chem. Ztg.* 1911, v. 35, pp. 274–276, 298–300.

Patents for the manufacture of sulphuric acid are recorded.—*J. Soc. Chem. Ind.* 1911, v. 30, pp. 85, 360, 684, 1159.

An editorial note (*Pharm. J.* 1911, v. 87, p. 2) calls attention to the great activity in the manufacture of sulphuric acid during the past year.

An editorial (*Oil, Paint, and Drug Reporter*, 1911, v. 79, May 1, p. 7) states that sulphuric acid is now made extensively by the copper smelters and that in one important instance the acid output is more important and profitable than the production of metal. See also November 27, p. 51, and October 16, p. 28F.

Oddo and Anelli report some observations on the molecular weight and the constitutional formula of sulphuric acid and of nitric acid.—*Chem. Ztg.* 1911, v. 35, pp. 837–839, 846–847.

Schütz, E., discusses the production of chemically pure sulphuric acid having a specific gravity of 1.84.—*Ztschr. ang. Chem.* 1911, v. 24, pp. 487–489.

Klein, Frederick, outlines a method for the rapid determination of sulphuric acid with the porous clay crucible.—*Am. J. Pharm.* 1911, v. 83, pp. 342–346.

Repiton, Fernand, presents a general method for the titrimetric estimation of free sulphuric acid, or of combinations of sulphates.—*Monit. Scientif.* 1911, v. 72, pp. 382–384.

Smith, Kline & French Co. (*Analytical Report*, 1911, p. 7) reports on 19 samples of sulphuric acid. Three were found to be slightly below the U. S. P. standard for strength. In the test for absence of nitric and nitrous acids, one sample was slightly abnormal. One sample showed a slight excess of heavy metals.

Brown, Linwood A., notes that sulphuric acid is on the market in a variety of strengths; 96–98 per cent, U. S. P., 92.5 per cent, 16 per cent, 10 per cent, and the fuming sulphuric acid containing sulphuric anhydride in solution.—*Proc. Kentucky Pharm. Assoc.* 1911, p. 91.

The Committee of Reference in Pharmacy (Third Report, Suppl., p. 2) recommends that dilute sulphuric acid contain 10 per cent by weight of hydrogen sulphate, H_2SO_4 ; it would then be in uniformity with the Ph. Helv. and the U. S. P.

The Pharmaceutical Journal (1911, v. 87, p. 431) adds that it would then also be in accordance with the Ph. Fr., Ph. Belg., Ph. Svec., Ph. Hung., Ph. Hisp., Ph. Port., and the Ph. Japon.

Bergius, Friedrich, reports a study of absolute sulphuric acid as a solvent.—*Ztschr. physik. Chem.* 1910, v. 72, pp. 338–361.

Enklaar, J. E., reports observations on the dissociation constants of sulphuric acid and of oxalic acid.—*Chem. Weekblad*, 1911, v. 8, pp. 824–829.

Van Dorp, G. C. A., discusses equilibrium in the system, sulphuric acid, ammonia, and water at 30°.—*Ibid.*, pp. 269–273.

Attix, J. C., states that sulphurous acid is indicated as an antidote to potassium permanganate, and adds that sulphurous acid is not poisonous and excess will do no harm.—*Pharm. Era*, 1911, v. 44, p. 23.

Heeve, William L., gives sulphuric acid in chronic diarrhoea, when the tongue is coated brownish or thick, dark coating upon the dorsum, with pointed tip and edges deeply injected.—*Nat. Eclect. M. Assoc. Quart.* 1910–1911, v. 2, p. 121.

Majumdar, P. C., states that in the treatment of odontalgia or toothache, sulphuric acid is indicated when pain begins slowly and generally increases in intensity and then suddenly ceases.—*Hahe-mann. Month.* 1911, v. 46, p. 634.

ACIDUM SULPHURICUM AROMATICUM.

Porter, C. S., reports examining 15 samples of aromatic sulphuric acid, 12 of which were not of U. S. P. strength.—*Am. Druggist*, 1911, v. 59, p. 42.

Bachman, Gustav, reports that the sample of aromatic sulphuric acid analyzed contained 14.7 per cent of H_2SO_4 .—*Proc. Minnesota Pharm. Assoc.* 1911, p. 101.

ACIDUM SULPHUROSUM.

Craig, Hugh, reports objections to deleting sulphurous acid.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 608.

Elvove, Elias, presents a note on the use of sulphur dioxide in checking the equivalencies of the volumetric solutions of iodine, alkali, and silver.—*Am. J. Pharm.* 1911, v. 83, pp. 19–23.

Serger, H., reviews some of the literature relating to the utilization of sulphurous acid as a chemical preservative.—*Chem. Ztg.* 1911, v. 35, pp. 1202–1203. See also Tankard, A. R., *Pharm. J.* 1911, v. 87, p. 5.

ACIDUM TANNICUM.

Galloway, B. T., reports that the investigation of wild tannin plants throughout the United States, with reference to their availability and value, has been continued. The experimental cultivation of several of the more promising tannin crops has been undertaken.—*Ann. Rep. U. S. Dept. Agric.* 1911, 1912, p. 277.

Düsterbehn, F., states that according to the Ph. Germ. V tannic acid is to be derived exclusively from galls. It occurs as a white or slightly yellowish powder and is soluble in equal parts of water.—Apoth.-Ztg. 1911, v. 26, p. 125. See also Pharm. J. 1911, v. 86, p. 497, and Pharm. Zentralh. 1911, v. 52, p. 167.

Steinkopf and Sargarian discuss the composition of tannin and comment on the paper by Iljin (1909, v. 42, p. 1731).—Ber. deutsch. chem. Gesellsch. 1911, v. 44, pp. 2904-2906.

Iljin, Leo F., replies and presents some further notes on the composition of tannin.—*Ibid.* pp. 3318-3319.

Luftensteiner, Hans, in a contribution on anthelmintics, discusses the nature of tannin and enumerates its constituents.—Pharm. Prax. 1911, v. 10, pp. 154-157.

Nierenstein, M., presents a further contribution in which he discusses the question of the constitution of tannin, and reports on the making of a number of tannin derivatives.—Ann. Chem. 1911-1912, v. 386, pp. 318-332. See also Chem. Ztg. 1911, v. 35, p. 31.

Singh, Puran, presents a preliminary note on the use of nickel hydroxide in tannin estimation.—J. Soc. Chem. Ind. 1911, v. 30, p. 936.

Glücksman, C., presents a further contribution on the determination of tannin by means of formaldehyde.—Pharm. Prax. 1911, v. 10, pp. 243-248.

Rogers, J. S., presents the referee report on tannin and describes the proposed methods for the determination of tannin.—Proc. Assoc. Off. Agric. Chem. 1911, 28th Ann. Conv., pp. 221-233 (Bull. Bur. Chem. U. S. Dept. Agric. 1912, No. 152).

Smith, Kline & French Co. (Analytical Report, 1911, p. 8) reports on 10 samples of tannic acid. Two samples were found to contain traces of resinous substances. See also Proc. Pennsylvania Pharm. Assoc. 1911, p. 130, and Bull. Am. Pharm. Assoc. 1911, v. 6, p. 348.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 68) state that the average moisture loss at 100° is 11.5 to 12 per cent.

Diekman, George C., reports the opinion that the use of glycerin in tannic acid ointment is not necessary and should be omitted.—Proc. New York Pharm. Assoc. 1911, p. 82.

Prinz, Hermann, points out that when administered internally tannic acid is changed in the intestinal canal into gallic acid, is largely absorbed as gallic acid, and as such possesses no stypitic action whatsoever.—Dental Cosmos, 1911, v. 53, p. 1374.

ACIDUM TARTARICUM.

Düsterbehn, F., points out that, according to the Ph. Germ. V, tartaric acid is soluble in 1 part of water and 4 parts of alcohol.—Apoth.-Ztg. 1911, v. 26, p. 125. See also Chem. & Drug. 1911, v. 78, p. 13, and Pharm. Zentralh. 1911, v. 52, p. 167.

Gaidas, E., criticizes the Ph. Germ. V lime water identity test for tartaric acid.—Apoth.-Ztg. 1911, v. 26, p. 571.

Heczko, Arnold, reports observations on the estimation of tartaric acid.—Ztschr. anal. Chem. 1911, v. 50, pp. 12–21.

Whitney, D. V., reports a sample of tartaric acid containing iron.—Proc. Missouri Pharm. Assoc. 1911, p. 96.

Bachman, Gustav, reports that 2 samples of tartaric acid examined were 99.3 and 99.5 per cent pure.—Proc. Minnesota Pharm. Assoc. 1911, p. 101.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 69) report that 150 samples of tartaric acid examined contained below 0.0001 per cent arsenic, and below 0.002 per cent lead. One sample leaving 0.02 per cent ash was estimated as containing 0.002 per cent of iron as Fe_2O_3 .

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 39) report that mineral matter in tartaric acid still gives some trouble, the official limit of 0.05 per cent being decidedly stringent. Samples examined have yielded figures for ash ranging from 0.025 to 0.26 per cent, the average result being 0.08 per cent.

The public analyst reports that a sample of tartaric acid analyzed contained 1.8 per cent of mineral matter.—Pharm. J. 1911, v. 86, p. 422.

ACONITINA.

Fühner, Hermann, discusses the toxicological detection of aconitine.—Arch. exper. Path. u. Pharmacol. 1911, v. 66, pp. 179–190.

Hartung, Curt, reports experiments on the action of crystallized aconitine on the isolated frog's heart.—*Ibid.* pp. 1–57.

He also reports on the action of crystallized aconitine on the motor nerve and on the muscles of cold-blooded animals.—*Ibid.* pp. 58–70. See also v. 67, p. 191.

ACONITUM.

Lezenius, Edgar, discusses the origin and the pronunciation of the word "Aconitum."—Pharm. Zentralh. 1911, v. 52, p. 74.

Lloyd, John Uri, states that aconite was familiar to the ancients as a poisonous plant, and was used by the ancient Chinese as well as by the hill tribes of India. It was introduced into modern medicine by Störk, of Vienna, in 1763.—Bull. Lloyd Libr. 1911, No. 18, p. 1. See also Eclect. Med. Glean. 1911, v. 7, p. 405.

Mansfield, William, suggests that the stem-crowned root alone be described in the Pharmacopœia, and thinks that the bud-crowned root could be used for propagating or continuing the plant.—Am. J. Pharm. 1911, v. 83, p. 441. See also Drug. Circ. 1911, v. 55, pp. 627–629.

Hartwich, C., points out that the Ph. Germ. V now restricts the origin of aconite to the bud-crowned tubers of wild-growing plants. He also points out that the assay process has been dropped because of the recognition of the fact that the resulting product is not necessarily the active agent.—*Apoth.-Ztg.* 1911, v. 26, p. 105.

Caesar & Loretz (*Jahres-Bericht*, 1911, pp. 143-144) present a table showing the alkaloid content requirement included in the several pharmacopœias.

Stevens, A. B., discusses the assay of aconite and asserts that when properly kept it does not deteriorate. The chemical assay, while not scientifically exact, is sufficiently accurate for practical purposes. He thinks that chloroform should not be used in the assay and that the Squibb test is not suitable for pharmacopœial standardization.—*Bull. Pharm.* 1911, v. 25, p. 237-239.

Dohme and Engelhardt point out that, to avoid hydrolysis as much as possible, the ammonia might be replaced by sodium carbonate or bicarbonate solution. The present method of assay is very tiresome.—*Am. J. Pharm.* 1911, v. 83, p. 519.

Kimberly, C. H., reports that one of the most tedious of the U. S. P. assay processes is the one for the assay of aconite root.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 159.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 5) in reporting on the assay of aconite root state that decomposition was minimized by a spontaneous evaporation of the alcoholic percolate in a flat dish with the addition of pumice and a final thorough desiccation by the action of sulphuric acid in a vacuum.

Smith, Kline & French Co. (*Analytical Notes*, 1911, p. 8) reports that the U. S. P. assay method for aconite is not reliable. Several preparations of aconite were found to assay full strength by this method, but were very low when tested physiologically, powdered and solid extracts being notable examples. See also *Proc. Pennsylvania Pharm. Assoc.* 1911, p. 118, and *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 344.

Roberts, John G., reports some observations on the relation between the physiological and chemical testing of aconite, and points out that an erroneous result is likely to be obtained when reliance is placed wholly on the chemical assay of the powdered and solid extracts.—*Proc. Pennsylvania Pharm. Assoc.* 1911, pp. 312-313.

Wood, H. C., jr., reports the recommendation of a physiological standard for aconite.—*J. Am. M. Assoc.* 1911, v. 56, p. 606. Also *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 24.

Burmann, James, in a discussion of the annual variation in the active principles in a number of medicinal plants, points out that during the past four years aconite from the same sources varied from 0.042 per cent of alkaloid in 1909 to 0.104 per cent in 1907.—*Schweiz. Wehnschr. Chem. u. Pharm.* 1911, v. 49, p. 8.

LaWall and Meade report the assay of 2 samples of fluid extract of aconite, 5 and 7 years old, respectively, which were both found to be above the present U. S. P. strength.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 104.

Table showing reported variations in alkaloidal content of aconite.

Reporter.	Number of samples.	Per cent.		References.
		Minimum.	Maximum.	
Ferguson, George A.....	2	0.512	0.540	Proc. New York Pharm. Assoc. 1911, p. 182.
Noyes, C. R.....	3	0.333	0.63	Proc. Minnesota Pharm. Assoc. 1911, p. 75.
Vanderkleed, Chas. E.....	15	0.372	0.965	Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.
Evans Sons Loecher & Webb.	3	0.385	0.792	Analytical Notes, 1911, 1912, p. 5.

Schneider, Albert, reports on 4 samples of aconite root, 3 of which were found to be adulterated.—Pacific Pharm. 1911, v. 5, p. 177.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 5) report that the ash of a sample of powdered aconite leaves proved to be 11.64 per cent.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, states that the official assayed powder of aconite does not present the dangers of the very variable aconitine of commerce.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 228. Also J. Pharm. Anvers, 1911, v. 67, p. 516.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 3) recommends, as an approximation to the requirements of the International Agreement, that tincture of aconite be made with 10 per cent w/v of the root and with 70 per cent alcohol, the root being standardized to a minimum of 0.4 per cent of ether soluble alkaloids the tincture would contain 0.04 per cent of such. See also Pharm. J. 1911, v. 87, p. 847.

Sayre, L. E., points out that a tincture of aconite made from the fluid extract will not have the same physical properties as a preparation made according to the U. S. P.—Bull. Kansas Bd. Health, 1911, v. 7, p. 139.

Havenhill, L. D., reports that not one of the 61 samples of tincture of aconite examined was reported as having been made by the official process. Only about 20 per cent of the preparations were found to be better than 25 per cent of the standard.—Proc. Kansas Pharm. Assoc. 1911, p. 110.

Sayre, L. E., reports that of 11 samples of tincture of aconite examined 9 were found to be below standard.—Bull. Kansas Bd. Health, 1911, v. 7, p. 140.

The Biennial Report of the Inspection of Pharmacies, 1909-1910, states that the alkaloidal content of this tincture is very variable.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 240. Also J. Pharm. Anvers, 1911, v. 67, p. 564.

The Paris Correspondent (Chem. & Drug. 1911, v. 78, p. 905) reports a fatal case of aconite poisoning in a pharmacist engaged in making medicated wines.

Majumdar, P. C., states that aconite heads the list as a remedy for odontalgia or toothache.—Hahnemann. Month. 1911, v. 46, p. 633.

An editorial note (Critic and Guide, 1911, v. 14, p. 187) states that five drop doses of the tincture of aconite every hour until four doses have been taken may prove effective in aborting a case of quinsy.

Fyfe, John W., states that aconite is usually the specific remedy in asthenia, and, briefly speaking, is especially indicated when the pulse is small and frequent.—Eclectic Med. Glean. 1911, v. 7, p. 521.

Jones, Eli G., states that aconite has been prescribed for all kinds of fevers and inflammations, but it should only be prescribed when indicated. The indications he gives in detail.—J. Therap. & Diet. 1911, v. 5, p. 304.

Berstein, Ralph, states that aconite is especially useful in pruritis without manifest eruption and which is of recent occurrence. There is that usual aconite fear that something is going to happen, and this time it is some dread skin eruption is about to appear.—J. Am. Inst. Homœop. 1911, v. 3, p. 157.

ADEPS.

Schneider, A., notes that the Ph. Germ. V has increased the upper limit of melting point for lard from 42 to 46°. He also calls attention to the official German tests for lard to which the pharmacopœial article must now respond.—Pharm. Zentrallh. 1911, v. 52, pp. 189-191, 306-309. See also Chem. & Drug. 1911, v. 78, p. 230.

Alpers, Karl, points out that the Ph. Germ. V monographs for lard, suet, brandy, and wine make it necessary that the apothecary acquaint himself with the laws relating to the composition of these several articles.—Pharm. Ztg. 1911, v. 56, p. 35.

The Committee of Reference in Pharmacy (Third Report, p. 3) suggests a monograph under the title *Adeps præparatus* for the present official monograph *Adeps Ph. Brit.* See also Pharm. J. 1911, v. 87, p. 460.

Bailey, H. S., in the referee report on the fats and oils, discusses the detection of beef fat in lard.—Proc. Assoc. Off. Agric. Chem. 1911, 28th Ann. Conv. pp. 96-100 (Bull. Bur. Chem. U. S. Dept. Agric. 1912, No. 152).

Grélot, P., discusses certain physical and chemical constants of lard.—Bull. sc. pharmacol. 1911, v. 18, pp. 201-206.

Utz, in a review of the chemistry of fats during the years 1909-1910, discusses the detection of foreign fats in lard.—*Pharm. Prax.* 1911, v. 10, pp. 347-355.

Caspari, Charles, jr., is reported as stating that some lard compounds were found to contain only 10 per cent lard, the remainder being cotton seed oil and beef stearin.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 221. See also *Proc. Maryland Pharm. Assoc.* 1911, v. 81.

Lythgoe, Hermann C., reports that of 36 samples of lard examined, 7 were adulterated and were found to be the usual mixtures of cotton seed oil with lard stearine, beef stearine, or both.—*Rep. Massachusetts Bd. Health*, 1911, p. 434.

Lynch, R. L., reports that of 64 samples of lard examined, 33 contained beef stearin or mixtures of beef stearin and cotton seed oil.—*Rep. District of Columbia Health Off. for 1911*, p. 68.

Coblentz, Virgil, thinks it inexcusable to substitute petrolatum in place of benzoated lard in pharmacopœial preparations where the ointment vehicle is specifically ordered. There are definite medical grounds for using one or the other.—*Pract. Drug.* 1911, v. 29, Apr., p. 28.

The Biennial Report of the Inspection of Pharmacies, 1909-1910, states that adeps is frequently mixed with grease, rancid and even watery. It is also sometimes mixed with cotton seed oil.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 228. Also *J. Pharm. Anvers*, 1911, v. 67, p. 516.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 40) report the following constants observed in 20 samples of lard: saponification value, 191.8 to 198.2; iodine value, 53.5 to 67.2; and a refractive index (60°), 1.4506 to 1.4523. See also p. 81.

ADEPS BENZOINATUS.

Roderfeld, A., in a review of the *Ph. Germ.* V (*Apoth. Ztg.* 1911, v. 26, p. 261) points out that the *Pharmacopœia* has finally adopted the use of benzoin for benzoating lard.

An unsigned review (*Pharm. J.* 1911, v. 86, p. 708) of the *Ph. Germ.* V, points out that benzoated lard is made from gum benzoin instead of benzoic acid as formerly.

The Committee of Reference in Pharmacy (Third Report, p. 4) suggests a monograph for benzoated lard in which it is directed that the lard and benzoin are to be heated together for one hour at 60° . See also *Pharm. J.* 1911, v. 87, p. 460.

Wild, R. B., gives the melting point of benzoated lard as $37-39^{\circ}$.—*Brit. M. J.* 1911, v. 2, p. 161.

Diekman, George C., reports the opinion that the formula for benzoated lard in the *U. S. P.* 1890 is a more cleanly process than that in the present *Pharmacopœia*, and just as good.—*Proc. New York Pharm. Assoc.* 1911, p. 82.

Utech, Henry, recommends that the benzoin be first coarsely comminuted and mixed with an equal quantity of anhydrous sodium sulphate in order to prevent the formation of a gummy mass on heating.—*Western Druggist*, 1911, v. 33, p. 14.

Altmann, Richard M., suggests the use of elm bark as a preservative for lard.—*Nat. Druggist*, 1911, v. 41, p. 30. See also *Drug. Circ.* 1911, v. 55, p. 128.

ADEPS LANÆ.

The Committee of Reference in Pharmacy (Third Report, p. 4) suggests a monograph for adeps lanæ. The name "anhydrous lanolin" at present given as a synonym in the Codex is introduced. The melting point is given as about 40°, a new test for alkalies is given, and the test for cholesterol (referred to as cholesterin) is revised. See also *Pharm. J.* 1911, v. 87, p. 460.

An unsigned review of the Ph. Germ. V (*Chem. & Drug.* 1911, v. 78, p. 230) points out that the melting point of wool fat is now given as being about 40°. See also *Pharm. J.* 1911, v. 86, p. 653.

Weinstein, Joseph, reports on 4 samples of adeps lanæ, 3 were standard and 1 contained over 40 per cent of water.—*Proc. New York Pharm. Assoc.* 1911, p. 150.

Wild, R. B., gives the melting point of anhydrous wool fat as 39–40°.—*Brit. M. J.* 1911, v. 2, p. 161.

Wagenaar, M., discusses the reactions for foreign fats in wax, paraffin, spermaceti, and wool fat.—*Pharm. Weekblad*, 1911, v. 48, pp. 479–481.

ADEPS LANÆ HYDROSUS.

The Committee of Reference in Pharmacy (Third Report, p. 4) suggests a monograph for adeps lanæ hydrosus. The name at present given as a synonym in the Codex is introduced; the direction for making and the characters are shortened. See also *Pharm. J.* 1911, v. 87, p. 460.

An unsigned review (*Chem. & Drug.* 1911, v. 78, p. 632) states that, under the title of lanolin, the Ph. Germ. V includes a mixture of wool fat 15, water 5, and liquid paraffin 3.

An editorial (*J. Am. M. Assoc.* 1911, v. 57, p. 906) points out that as long ago as 1902 a court decision established the fact that lanolin became a nonproprietary name when the patent on the product expired. To help remove the misapprehension that exists regarding the use of this word the Council on Pharmacy and Chemistry has decided to list lanolin as a synonym for the official title.

The editor (*Pharm. J. Lond.* 1911, v. 87, p. 401), in commenting on the proposed use of lanolin in N. N. R. as a synonym for adeps lanæ hydrosus, states that the word lanolin is not now protected in Great Britain and appears in the British Pharmaceutical Codex as a synonym for hydrous wool fat.

An unsigned article (Am. Druggist, 1911, v. 58, p. 138) points out that the lanolinum of the Ph. Germ. V is now a mixture of wool fat 15, water 5, liquid petrolatum 3 parts.

Raubenheimer, Otto, thinks that every pharmacist should make his own hydrated wool fat, and expresses the belief that the German Pharmacopœia formula is splendid.—Proc. New York Pharm. Assoc. 1911, p. 95.

Wild, R. B., gives the melting point of hydrous wool fat as 40°–41°.—Brit. M. J. 1911, v. 2, p. 161.

Diekman, George C., reports the opinion that adeps lanæ hydrosus should be dropped.—Proc. New York Pharm. Assoc. 1911, p. 82.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 40) report on 12 samples of lanolin which were found to have an iodine value of 34.8 to 49.1 and a saponification value of 86 to 93. See also p. 81.

ETHER.

Lloyd, Gordon, states that ether, the discovery of which as an anæsthetic led to the use of both chloroform and nitrous oxide, was used in the first painless surgical operation in the world's history, in 1842, at Jefferson, Ga., by Crawford Williamson Long.—Rocky Mountain Druggist, 1911, v. 25, March, p. 43.

Düsterbehn, F., points out that the former monographs for "Æther" and "Æther pro narcosi" are now combined in the Ph. Germ. V under the one heading "Æther." Because of the possible extraction of vanillin from corks the latter when used in connection with ether are to be protected by a layer of parchment paper.—Apoth.-Ztg. 1911, v. 26, p. 125. See also Pharm. J. 1911, v. 86, p. 497.

Schneider, A., points out that the Ph. Germ. V has combined the description for ether and ether for anæsthesia under one heading.—Pharm. Zentralh. 1911, v. 52, p. 343.

Linke, H., reports that commercial ether does not always respond to the Ph. Germ. V requirements of no color reaction or opalescence on shaking with Nessler's solution.—Ber. pharm. Gesellsch. 1911, v. 21, p. 182.

Baskerville and Hamor present an exhaustive review of the chemistry of ethyl ether, and call attention to the pharmacopœial requirements for this product. They discuss the tests for the detection of various contaminations and outline a scheme for the systematic examination of ethyl ether for analytical and anæsthetic purposes and report their findings on the degree of purity of American ethyl ether used for anæsthesia.—J. Ind. & Eng. Chem. 1911, v. 3, pp. 301–317, 378–398.

Brown, Linwood A., notes that ether comes in a variety of forms: Anhydrous, U. S. P., containing 4 per cent alcohol; sulphuric ether,

containing 10 to 20 per cent alcohol; washed ether, etc., *ad infinitum*.—Proc. Kentucky Pharm. Assoc. 1911, p. 91.

Baskerville, Chas., in a communication on the chemistry of anæsthetics, discusses the several commercial grades of ether; also calls attention to possible contaminations and the need for care in storing and in handling this article.—J. Frankl. Inst. 1911, v. 172, pp. 117-124.

Rosengarten, Geo. D., describes and illustrates a method for the determination of the specific gravity of ethyl ether U. S. P.—J. Ind. & Eng. Chem. 1911, v. 3, p. 872.

Pound, James Robert, reports observations on the physical properties of mixtures of ether and sulphuric acid.—J. Chem. Soc. Lond. 1911, v. 99, pp. 698-713.

Wijnne, A. J., reports a sample of ether that indicated the presence of hydrogen dioxide.—Pharm. Weekblad, 1911, v. 48, p. 132.

An unsigned article (Am. Druggist, 1911, v. 58, p. 8) endorses the suggestion of L. L. Walton, that the U. S. P. provide a test for hydrogen dioxide.

Guérin, G., presents a note on the presence of acetone and formol in certain samples of official ether.—J. Pharm. et Chim. 1911, v. 4, p. 492.

Mylius and Hüttner discuss the use of ether in the analysis of metals.—Ber. deutsch. chem. Gesellsch. 1911, v. 44, pp. 1315-1327. See also Ztschr. anorg. Chem. 1911, v. 70, pp. 203-231.

Wiley, H. W., reports a number of lots of ether, chemically pure, absolute, as having been rejected owing to the fact that the article contained an excess of non-volatile material and gave the test for the presence of peroxide.—Ann. Rep. U. S. Dept. Agric. 1911, 1912, p. 437.

The Biennial Report of the Inspection of Pharmacies, 1909-1910, states that sulphuric ether was generally poorly preserved in white bottles.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 232; and J. Pharm. Anvers, 1911, v. 67, p. 520.

Baskerville, Charles, presents a list of anæsthetics, general and local, and anæsthetic mixtures, both past and present; with synonyms.—Am. Druggist, 1911, v. 58, pp. 72-73, 108-109, 139.

Bevan, Arthur Dean, concludes that for routine work ether, by the open or drop method, is the safest and most satisfactory anæsthetic and, in the usual run of cases in a hospital service, the anæsthetic of choice in from 75 to 80 per cent of the cases.—J. Am. M. Assoc. 1911, v. 57, pp. 1821-1824.

Meltzer, S. J., considers intratracheal insufflation the ideal method of administration of ether.—*Ibid.* p. 523.

Coughlin, William T., contributes a brief illustrated paper on the ether rausch, a safe and certain method of producing brief, general, complete anæsthesia with ether.—*Ibid.* p. 17.

Burkhardt, Kummell and others discuss intravenous ether anaesthesia. Udewald considers this the method of choice for operations on the head and neck.—*Merck's Ann. Rep.* 1911, v. 25, pp. 231-235.

Rood, Felix, discusses the use of normal saline infusion as a means of administering ether, with a tabulated summary of some 21 cases.—*Brit. M. J.* 1911, v. 2, pp. 974-976.

Lucas, Harold A., reports some observations on the drop method of administering ether.—*Med Rec.* 1911, v. 80, p. 1077.

Barton, G. A. H., describes and illustrates an apparatus for the open or semi-open administration of ether.—*Lancet*, 1911, v. 180, p. 1143.

An editorial note (*Chem. & Drug.* 1911, v. 78, p. 289) quotes the report of the Registrar-General to the effect that in 1908 there were 16 poisonings from ether, by negligence or accident, as compared with 18 poisonings by the same cause in 1909.

Lumbard, Joseph E., in the presentation of a series of "Anæsthesia Don'ts," points out that ether usually gives warning of approaching danger which chloroform is not apt to do. Ether is a stimulant, while chloroform is a depressant.—*Med. Rec.* 1911, v. 80, p. 1027.

Hellman, Alfred M., discusses the use of ether as a general anæsthetic, and states that in administering ether the most important thing to notice is the respiration, color, and the pulse. The beginning dilatation of pupil is an early danger sign.—*Am. Med.* 1911, v. 17, p. 29.

The editor of the "Therapeutics" column discusses the administration, action, and therapy of ether.—*J. Am. M. Assoc.* 1911, v. 57, p. 1538. See also pp. 1614-1617, 1696-1697, 1915, and 1997.

Gatch, W. D., asserts that morphine, or any drug which depresses the respiration, retards the elimination of ether or chloroform.—*Ibid.* p. 1599.

Mortimer, J. D., discusses fatalities during anaesthesia and points out some of the causes for the incompleteness of the available reports—*Practitioner*, 1911, v. 87, pp. 360-363.

Hawk, P. B., reports that the postanæsthetic glycosuria, observed in his series of experiments on dogs, was due primarily to the effect of the ether in stimulating the transformation of glycogen into dextrose. Dyspnoea may also have been a contributing factor.—*Arch. Int. Med.* 1911, v. 8, pp. 39-57.

The same author presents a second paper on urine formation during ether anaesthesia, in which he concludes that the inhibition of the urine forming function was probably due to the effect of the ether in constricting the arterioles of the kidney's blood supply.—*Ibid.* pp. 177-182.

Swan, John M., reports the results of his study of postanæsthetic glycosuria in 16 surgical patients.—*Ibid.* p. 58.

The *Lancet* (1911, v. 181, p. 1847) in the yearly summary, calls attention to the exceptional number of valuable papers on the subject of anaesthetics. See also p. 1850.

Additional references on the chemistry and uses of ether will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Zentralbl. Biochem. & Biophysik.*; and *Chem. Centralbl.*

ETHER ACETICUS.

Düsterbehn, F., points out that according to the *Ph. Germ. V* the specific gravity of acetic ether may vary from 0.902 to 0.906 and that the substance should boil from 74° to 77°.—*Apoth. Ztg.* 1911, v. 26, p. 125. See also *Pharm. J.* 1911, v. 86, p. 497.

Smith, Kline & French Co. (*Analytical Report*, 1911, p. 8) reports that 7 samples of acetic ether were examined, ranging in specific gravity at 25° from 0.892 to 0.896. The boiling points ranged from 70° to 80°. Three samples contained traces of readily carbonizable impurities. See also *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 343.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 30) report that 4 samples of ethyl acetate varied in specific gravity from 0.900 to 0.907, boiling point from 72° to 78°, saponification value from 607 to 635.7, and dissolved, in an equal volume of water, 2 to 12.5 per cent.

ETHYLIS CARBAMAS.

Japhe, Fanny, reports a number of experiments to determine the habituation of the animal organism to urethane.—*Therap. Monatsh.* 1911, v. 25, p. 112.

Häni, Joh. Rud., reports observations on intensifying the narcotic action of urethane by means of scopolamine.—*Therap. Gegenw.* 1911, v. 52, p. 63.

Rappoport, Chassia, reports observations on the influence of urethane on the action of opium.—*Ztschr. exper. Path. u. Therap.* 1911, v. 9, pp. 39–48.

ETHYLIS CHLORIDUM.

Düsterbehn, F., notes that the *Ph. Germ. V* describes ethyl chloride as a clear, colorless, very volatile liquid having a characteristic odor, slightly soluble in water, and readily miscible in all proportions with alcohol and ether; boils at from 12° to 12.5°.—*Apoth.-Ztg.* 1911, v. 26, p. 135. See also *Pharm. J.* 1911, v. 86, p. 497.

Loosely, C. J., describes and illustrates an improved ethyl chloride inhaler.—*Lancet*, 1911, v. 180, p. 593.

Milne, James A., contributes a note on the administration of ethyl chloride by an open method.—*Brit. M. J.* 1911, v. 1, p. 1051.

The editor of the "Therapeutics" column asserts that as ethyl chloride has caused a number of fatalities, perhaps about one in 3,000 administrations, there is no good excuse for using it as a general anæsthetic. It was first used in 1848, but did not gain importance until urged again just prior to 1880, when it was condemned by a committee of the British Medical Association.—*J. Am. M. Assoc.* 1911, v. 57, p. 1915.

Brown, Gilbert, reports 2 cases of death from post-anæsthetic acid intoxication, 1 of them after ethyl chloride.—*Brit. M. J.* 1911, v. 1, p. 429. See also pp. 809, 905.

Buxton, J. B., reports 3 out of 4 cases of follicular mange successfully treated by spraying with ethyl chloride.—*Am. Vet. Rev.* 1911, v. 39, p. 677. See also *Vet. J.* 1911, v. 67, pp. 363–364.

AGAR-AGAR.

West, George N., reports that agar-agar is made from six kinds of leaves found on the coasts of the Provinces of Izu, Tosa, and Sado.—*Cons. & Tr. Rep.* Dec. 11, 1911, p. 1278.

The Chemist and Druggist (1911, v. 78, p. 369) states that the Japanese exports amounted to 1,775,710 kin in 1908, 1,872,156 in 1909, and 2,118,012 in 1910.

Caesar & Loretz (*Jahres-Bericht*, 1911, p. 11) report that the available supplies of prime quality agar-agar are limited.

Sollman, Torald, points out that agar and other gums give a golden or brownish-yellow color on heating with sodium hydroxide solution, but they do not reduce Fehling's solution even on prolonged heating.—*Am. J. Pharm.* 1911, v. 83, pp. 176–177.

Perrot and Gatin discuss, among other edible algæ of the extreme Orient, agar-agar.—*Bull. sc. pharmacol.* 1911, v. 18, pp. 611–621, 650–670, 712–734.

An editorial (*Pacific Pharm.* 1911, v. 5, p. 66) states that agar-agar is known as a very efficient agent to overcome habitual constipation. Its action may be explained as follows: Agar is an indigestible substance with a strong affinity for water. When introduced into the digestive tract it takes up water and this in turn softens the fæces. The bulk further stimulates the action of the intestines. The agar (powdered) should be taken once or twice daily in doses of from one to four teaspoonfuls, mixed with some food, as cereal, prunes, stewed apple, etc. This simple, cheap, and entirely harmless remedy is certainly worthy of a trial.

ALBUMIN.

Kojo, Kenji, discusses the chemistry of the hen's egg. He finds that the albumin contains approximately 81.7 per cent of water, 12.29 per cent of solid matter, and 0.4 per cent of ash.—*Ztschr. physiol. Chem.* 1911, v. 75, pp. 1–12.

Westhausser, F., presents a contribution on the estimation of albumin and the pepsin digestion of albumin.—*Ibid.* 1911, v. 72, pp. 363–373.

ALCOHOL.

Düsterbehn, F., in a review of the Ph. Germ. V (Apoth.-Ztg. 1911, v. 26, p. 242) points out that the specific gravity requirement for alcohol has remained the same, though the alcohol content requirement has been slightly lowered. See also Chem. & Drug. 1911, v. 78, p. 124.

The Committee of Reference in Pharmacy (Third Report, p. 33) recommends that in the aldehyde test, under rectified spirit, solution of potassium hydroxide be replaced by a 20 per cent aqueous solution of potassium hydroxide. See also Pharm. J. 1911, v. 87, p. 812.

A quotation from the Canadian Gazette announces that, when the word alcohol is used without any specifically modifying term, ethyl alcohol is to be understood.—Montreal Pharm. J. 1911, v. 22, p. 50.

An unsigned article (Oil, Paint, and Drug Reporter, 1911, v. 79, April 24, p. 28J) discusses the production of industrial alcohol, its sources and modes of manufacture, and the relative value of various common sources of alcohol.

v. Lebedew, A., reports some observations on the mechanism of alcoholic fermentation.—Ber. deutsch. chem. Gesellsch. 1911, v. 44, pp. 2932–2942. See also Compt. rend. Acad. Sc. 1911, v. 153, pp. 136–139; and Bull. Soc. chim. France, 1911, v. 9, pp. 953–957.

Lintner and v. Liebig report some observations on the reduction of furfural with yeast in the course of alcoholic fermentation.—Ztschr. physiol. Chem. 1911, v. 72, pp. 449–454.

A news note (Oil, Paint, and Drug Reporter, 1911, v. 79, Mar. 20, p. 28I) calls attention to a French process for manufacturing alcohol from sawdust.

Pinner, E. L., reviews some of the recent literature relating to the chemistry of fermentation.—Fortschr. Chem. 1911, v. 4, pp. 135–145.

Gibbs, H. D., in a contribution on the alcohol industry of the Philippine Islands, presents a study, with illustrations, of some palms of commercial importance with special reference to the saps and their uses.—Philippine J. Sc. 1911, v. 6, A, pp. 99–143, 147–206. See also Cons. & Tr. Rep. December 4, 1911, p. 1138.

Rüdiger and Gruber review the production of alcohol and the preparations containing the same in the several countries during 1910.—Chem. Ind. 1911, v. 34, pp. 548–556, 616–627.

Kwisda, A., reviews some of the newer work on the chemistry of alcoholic fermentation.—Ztschr. allg. österr. Apoth.-Ver. 1911, v. 49, pp. 371–372, 385–386.

Rinckleben, P., reviews the progress in the fermentation industry during the years 1909–1910.—Chem. Ztg. 1911, v. 35, pp. 993–994, 1006–1008.

Jablczynski and Jablonski, in a discussion on reactions in heterogeneous systems, report on the influence of alcohol.—*Ztschr. physik. Chem.* 1911, v. 75, pp. 503–509.

Jones and Lapworth report observations on the influence of temperature on the basic water value of ethyl alcohol.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 917–937.

Lapworth and Partington, in a discussion on the electromotive forces in alcohol, report some experiments on concentration cells with electrodes reversible to chlorine ions.—*Ibid.* pp. 1417–1427.

Jones and Lapworth report experiments on the equilibrium in the system, ethyl alcohol, acetic acid, ethyl acetate and water, and its apparent displacement by hydrogen chloride.—*Ibid.* pp. 1427–1432.

Sidersky, D., presents a brief communication on the index of refraction of hydroalcoholic mixtures.—*Ann. chim. analyt.* 1911, v. 16, p. 142.

Wade and Merriman discuss the influence of water on the boiling point of ethyl alcohol at pressures above and below the atmospheric pressure.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 997–1011.

Ordonneau, C., discusses the determination of the actual alcohol content of certain sweetened alcoholic products.—*Ann. chim. analyt.* 1911, v. 16, pp. 139–142.

Bonis presents a note on the determination of the actual alcoholic strength, without distillation.—*Ibid.* p. 258.

Bernegau, L. Henry, reports cooperative work on alcohol determinations by Philadelphia chemists.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, pp. 165–169.

Wiley, H. W., reports that the estimation and separation of alcohol and ether, especially in mixtures containing essential oils, have been studied and a method, depending upon the separation of ether by means of condensers and alcohol traps maintained at a proper temperature, has been developed and gives promise of success.—*Ann. Rep. U. S. Dept. Agric.* 1911, 1912, p. 435.

Emery, W. O., in the referee report on headache mixtures, outlines a method for determining alcohol.—*Proc. Assoc. Off. Agric. Chem.* 1911, 28th Ann. Conv. pp. 236–241 (*Bull. Bur. Chem. U. S. Dept. Agric.* 1912, No. 152).

Bacon, Raymond F., discusses the detection and determination of small quantities of ethyl and methyl alcohol, and of formic acid.—*Chem. Eng.* 1911, v. 14, pp. 335–338. See also *Circ. Bur. Chem. U. S. Dept. Agric.* 1911, No. 74, pp. 8.

Koshino, T., outlines a method for detecting fusel oil in alcoholic beverages.—*J. Pharm. Soc. Japan*, 1911, May, p. 277.

Agulhon, H., presents a note on a colorimetric test for alcohol in the presence of acetone.—*Bull. sc. pharmacol.* 1911, v. 18, pp. 467–470. See also *Bull. Soc. chim. France*, 1911, v. 9, pp. 881–885.

Juckenack, A., discusses the valuation of alcoholic beverages.—*Ztschr. ang. Chem.* 1911, v. 24, pp. 1477-1480.

v. Buchka, K., discusses the alcoholic strength of various alcohol-containing beverages.—*Ibid.* pp. 1475-1477.

Utz reviews the progress made in the examination of alcohol during the years 1909-10.—*Oesterr. Chem.-Ztg.* 1911, v. 14, p. 193.

Diekman, George C., reports that a very important addition to the N. F. IV will be the statement of the alcohol strength in volume per cent of absolute alcohol of the various preparations containing it.—*Proc. New York Pharm. Assoc.* 1911, p. 91.

Wilbert, M. I., reports the recommendation to delete from the National Formulary all preparations that can be used as tipples, and the suggestion that the alcohol in all National Formulary preparations be reduced or eliminated wherever not actually necessary as a solvent.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 702.

An editorial (*Pract. Drug.* 1911, v. 29, December, p. 20) under the caption "Booze Medicines," endorses the resolutions adopted by the Washington Branch, A. Ph. A.

Cook, Alfred N., cautions druggists against using commercial alcohol for U. S. P. alcohol. Cologne spirits only should be used in making U. S. P. and N. F. preparations. A small per cent of variation in the strength of alcohol sometimes makes a great difference in its power to dissolve and hold certain drugs in solution.—*Bull. South Dakota Food & Drug Dept.* 1911, No. 23, p. 3.

Weinstein, Joseph, reports on 12 samples of alcohol; 8 contained wood alcohol. Some of these specimens were labeled acetone alcohol and others Columbian Spirits.—*Proc. New York Pharm. Ass.* 1911, p. 151.

Surface, H. Marvin, reports an examination of 20 samples of commercial alcohol which were approximately 2 per cent below the U. S. P. requirement; several of the samples gave positive tests for the presence of methyl alcohol.—*Proc. Virginia Pharm. Assoc.* 1911, pp. 102-107.

Brown, Lucius P., reports that of 3 samples of alcohol examined, 1, or 33.33 per cent, was found to be illegal.—*Rep. Tennessee Bd. Health*, 1911, p. 155.

Smith, Kline & French Co. (*Analytical Notes*, 1911, pp. 8-9) reports on 22 shipments of alcohol. All, with the exception of 2, left a weighable residue when 50 cc. were evaporated. All samples showed a faint acid reaction; 3 showed traces of aldehyde and oak tannin.

Street, John Phillips, reports on 70 samples of alcohol, 65 of which were adulterated or below standard.—*Rep. Connecticut Agric. Exper. Sta. for 1910*, 1911, p. 581. See also pp. 551-558.

Lythgoe, Hermann C., reports that of 106 samples of alcohol examined, 6 were found to be adulterated, containing from 39 to 76

per cent of alcohol by volume.—Rep. Massachusetts Bd. Health, 1911, p. 439.

Kelly, T. R., discusses some of the problems of the liquor traffic in the drug business.—Rocky Mountain Druggist, 1911, v. 25, Jan., p. 27.

Kebler, Lyman F., thinks that the Internal Revenue Department has been severely hampered in its campaign against alcohol containing nostrums by the inclusion in the Pharmacopœia and in the National Formulary of such a number of alcohol containing preparations that could be, and are being, used as tipples.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 702.

Schelenz, Hermann, reviews the references made by Shakespeare to alcoholic beverages.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 373–408.

A news note (Oil, Paint, and Drug Reporter, 1911, v. 79, Jan. 9, p. 28F) states that a review of the alcohol industry of Germany shows that the consumption of potable alcohol has been materially reduced, while the consumption for industrial purposes has been increased.

Sternberg, Wilhelm, discusses the use of alcoholic beverages as hypnotics.—Therap. Gegenw. 1911, v. 52, pp. 543–545.

An editorial (Therap. Gaz. 1911, v. 35, p. 344) calls attention to the abuse of alcohol in acute infections.

Wiley, Harvey W., points out that a few years ago some alcoholic beverage was regarded as necessary in the treatment and elimination of the causes of disease. Now, however, both as a means of preventing disease and as a remedy for disease, it is rapidly falling into disuse and is likely to become a mere memory in the *Materia Medica* and in the Pharmacopœia.—Boston M. & S. J. 1911, v. 165, p. 377.

Schürhoff discusses the temperate use of alcohol, coffee, tobacco, etc., and points out that the continued use of alcohol is likely to produce serious pathologic changes, particularly of the heart and liver.—D.-A. Apoth.-Ztg. 1911–1912, v. 32, p. 4.

Cattle, C. H., opens a discussion on the therapeutic use of alcohol and notes that in the London asylums 1,900 gallons of wine and spirits were consumed by the patients in 1889; in 1905 only 250 gallons were used.—Brit. M. J. 1911, v. 2, p. 1596.

Friedenwald, Julius, reports that he has found experimentally that pure alcohol is less toxic than whisky, and good whisky less toxic than inferior whisky, but more toxic than pure alcohol. Brandy is more toxic than alcohol or whisky, and genuine brandy just as toxic as ordinary brandy.—J. Am. M. Assoc. 1911, v. 56, p. 1680.

Vaughan, V. C., thinks the above investigations have not taken into account the relative toxicity by the intravenous and gastric

routes.—*Ibid.* p. 1680. See also Boston M. & S. J. 1911, v. 165, pp. 944-946.

Crothers, T. D., presents some observations of the delusion as to the stimulant and tonic effects of alcohol.—Boston M. & S. J. 1911, v. 165, p. 377.

Weisenburg, T. H., discusses the treatment of tic douloureux by alcoholic injection.—Therap. Gaz. 1911, v. 35, pp. 305-307.

An editorial (J. Adv. Therap. 1911, v. 29, p. 513) in commenting on the hypodermic use of alcohol in the treatment of neuritis asserts that this practice has been in vogue long enough to show that the relief afforded is but temporary at best, and that occasionally, at least, cases of neuritis are made much worse.

Dixon, W. E., asserts that alcohol is not only absorbed with great rapidity itself from the stomach and intestines but it facilitates the absorption of other substances dissolved in it.—Pharm. J. 1911, v. 87, p. 17.

Rosemann, R., discusses the hygienic importance of alcoholic beverages and concludes that the abuse of alcohol brings with it the deterioration of practically all of the organs of the body.—Ztschr. Unters. Nahr. u. Genussm. 1911, v. 22, pp. 24-34. See also Chem. Ztg. 1911, v. 35, p. 623; and Ztschr. ang. Chem. 1911, v. 24, pp. 1426-1428.

Hyslop, Theo. B., discusses the influence of parental alcoholism on the physique and ability of offspring, and criticizes the conclusions arrived at by the Galton Laboratory School of Eugenics.—Lancet, 1911, v. 180, p. 77. See also editorial, p. 177.

Sturge and Horsley present a communication on some of the biological and statistical errors in the work on parental alcoholism by Elderton and Pearson.—Brit. M. J. 1911, v. 1, pp. 72-82. See also pp. 94, 112, 206, 228, 332, 404.

Pearson, Karl, replies to criticisms of his communication on alcoholism and degeneracy.—*Ibid.* p. 50.

Capps, J. A., states that alcohol in toxic doses is followed by a rise in venous and a fall in arterial pressure.—J. Am. M. Assoc. 1911, v. 57, p. 151.

An editorial (Med. Rec. 1911, v. 79, p. 343) discusses the influence of alcohol in the Tropics, and points out that while alcohol is considered to be more harmful in the Tropics than in the temperate climes there may be occasions when its employment is indicated.

Howes, Pitts Edwin, discussing the treatment of pneumonia, states that the various alcoholic stimulants find a place in the treatment of the aged and those who, from any cause, are rendered so prematurely.—J. Therap. & Diet. 1911, v. 5, p. 205.

Ranson and Scott, discussing the results of medicinal treatment in 1,106 cases of delirium tremens, question the wisdom of the immediate

withdrawal of alcohol, since this seems to greatly increase the chances that the patient will become delirious.—*Am. J. M. Sc.* 1911, v. 141, pp. 673–687.

Neff, Irwin H., discusses some of the medical problems of alcoholism.—*Boston M. & S. J.* 1911, v. 164, pp. 112–115.

For a discussion of alcohol and its relation to insanity see *Brit. M. J.* 1911, v. 1, p. 1380.

Bowie, A. P., reports some clinical experience in alcoholism.—*Hahnemann. Month.* 1911, v. 46, pp. 420–421.

Petty, George E., discusses what can and what can not be accomplished by treatment in chronic alcoholism.—*J. Am. M. Assoc.* 1911, v. 57, pp. 1744–1748.

Crosby, Daniel, discusses the problem of State care of drug and alcohol habitues.—*Ibid.* pp. 1741–1744.

Merck, E. (*Ann. Rep.* 1911, v. 25, pp. 140–142) reviews some of the recent literature on the therapy of alcohol.

Additional references on the chemistry, pharmacology, and therapeutic uses of alcohol will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Exper. Sta. Rec.*; *Zentralbl. Biochem. & Biophysik.*; *Hyg. Rundschau*; and *Chem. Centralbl.*

ALCOHOL ABSOLUTUM.

Düsterbehn, F., points out that the Ph. Germ. V requires that absolute alcohol contain from 99.66 to 99.46 volume per cent, or 99.44 to 99.11 weight percent of alcohol. This corresponds to a specific gravity of 0.796 to 0.797, and boiling point of from 78° to 79°.—*Apoth.-Ztg.* 1911, v. 26, p. 135. See also *Pharm. J.* 1911, v. 86, p. 497, and *Pharm. Zentralh.* 1911, v. 52, p. 455.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 2) does not consider the introduction of a test for methyl alcohol necessary.

Kailan, Anton, reports observations on the specific gravity of absolute ethyl alcohol at 25°.—*Ber. deutsch. chem. Gesellsch.* 1911, v. 44, pp. 2881–2884.

Chemische Fabrik Griesheim-Elektron (Ger. Pat. 236,591, Dec. 22, 1909) describes a process for preparing absolute ethyl alcohol by means of anhydrous sodium sulphide which can be entirely recovered by heating after use.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 1088.

Wiley, H. W. reports several shipments of absolute alcohol as having been rejected because they were found to contain fusel oil.—*Ann. Rep. U. S. Dept. Agric.* 1911, 1912, p. 437.

ALCOHOL, DENATURED.

An editorial (*Oil, Paint, and Drug Reporter*, 1911, v. 79, Mar. 27, p. 7) points out that as an article of commerce, denatured alcohol has proven somewhat of a disappointment in this country. Its use is

growing slowly and is practically confined to those industries which have always used grain alcohol or wood alcohol.

The formulas for the several denaturants authorized by the Internal Revenue Service for use in the manufacture of denatured alcohol, are reprinted.—N. A. R. D. Notes, 1911, v. 11, p. 1634.

The Massachusetts State Board of Health (Monthly Bulletin, 1911, p. 11) reports on 14 samples of denatured alcohol, none properly labeled.

Lythgoe, Hermann C., reports that of 106 samples of denatured alcohol examined, 61 were adulterated.—Rep. Massachusetts Bd. Health, 1911, p. 439

Horbaczewski comments on the dangers to health from the technical use of methyl alcohol and denatured alcohol. He points out that the discontinuance of the use of methyl alcohol for denaturing ethyl alcohol, while accompanied with difficulties, is nevertheless desirable.—Österr. Sanitätswesen, 1911, v. 23, pp. 69–75.

An unsigned article (Pharm. Post, 1911, v. 44, pp. 181–184) reviews some of the literature relating to the dangerous properties of alcohol denatured with methyl alcohol.

ALCOHOL, METHYL.

Raubenheimer, Otto, thinks it criminal to sell methyl alcohol under the name of alcohol. When people ask for alcohol they want grain or ethyl alcohol.—Proc. New York Pharm. Assoc. 1911, p. 156.

Birstein, Denneler and Heiduschka discuss the distillation of methyl alcohol, and report a number of experiments to determine the influence of pressure and temperature on the production of methyl alcohol.—Ztschr. ang. Chem. 1911, v. 24, pp. 2429–2430.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, includes a table of analytical results showing a large number of preparations made with wood alcohol.—J. Pharm. Anvers, 1911, v. 67, pp. 565–579. See also p. 521; and Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 233.

Bacon, Raymond F., discusses the detection and determination of small quantities of ethyl and methyl alcohol and of formic acid.—Chem. Eng. 1911, v. 14, pp. 335–338. See also Circ. Bur. Chem. U. S. Dept. Agric. 1911, No. 74, pp. 8.

An unsigned article discusses the detection of methyl alcohol in alcohol containing preparations such as beverages, tinctures, fluid extracts, and toilet articles.—Pharm. Ztg. 1911, v. 56, pp. 859–860.

Smith, Kline & French Co. (Analytical Notes, 1911, p. 9) reports on 5 samples of methyl alcohol. The strengths were between 93 and 99 per cent by volume, with the exception of 1 sample which was 86.7 per cent by volume.

Lythgoe, Hermann C., reports that of 35 samples of methyl alcohol examined, 28 were adulterated. In many cases methyl alcohol was

sold for denatured alcohol.—Rep. Massachusetts Bd. Health, 1911, pp. 440, 443.

Robertson, John J., reports a serious accident from the spontaneous combustion of methylated spirit.—Lancet, 1911, v. 181, p. 475.

Another case is reported by W. J. Ernely Sumpter.—*Ibid.* p. 796.

Gehe & Co. (Handelsbericht, 1911, p. 119) call attention to the renewed efforts to use methyl alcohol in the production of pharmaceutical preparations, and to a number of cases of poisoning reported from Budapest.

The German Correspondent (Chem. & Drug. 1911, v. 79, p. 738) calls attention to the restrictions and prohibitions placed upon the use of methyl alcohol as a menstruum.

Ladd, E. F., presents a list of preparations, mostly hair tonics, which were found to contain wood alcohol.—North Dakota Pharm. Assoc. 1911, p. 66.

An editorial (Am. Perf. 1911-12, v. 6, p. 279) calls attention to a resolution of the Department of Health of the City of New York forbidding the use of methyl alcohol in any preparation or mixture to be applied to the person or body of another. See also D.-A. Apoth.-Ztg. 1911-12, v. 32, p. 159.

Ladd, E. F., points out that the law of North Dakota strictly prohibits the sale of any product which contains wood or methyl alcohol, whether the product be intended for internal or external purposes.—Bull. Agric. Exper. Sta. North Dakota, 1911, v. 1, No. 37, p. 428.

Lewin, L., discusses the toxic action of methyl alcohol. He points out that the evidence for the toxicity of methyl alcohol is without a flaw and that there can be no doubt that the inhaled fumes under suitable conditions are fully as toxic as when the substance itself is taken internally.—Apoth.-Ztg. 1911, v. 26, pp. 54-55.

An editorial (Pharm. Zentralh. 1911, v. 52, pp. 335-336) discusses the toxicity of methyl alcohol.

Müller, R., is reported as stating that the toxic action of methyl alcohol results in a fatty degeneration of the liver. The greater portion of the alcohol is consumed in the body and only a small amount appears in the urine as formiates.—*Ibid.* p. 808.

An unsigned article (*ibid.* pp. 884-885) calls attention to the experimental work to determine the toxicity of methyl alcohol reported by Reid Hunt (Johns Hopkins Hospital Bulletin, 1902, v. 13).

Holloway, T. B., reports a case of methyl alcohol amblyopia and reviews some of the literature.—N. York M. J. 1911, v. 93, pp. 1030-1032. See also editorial, p. 1043.

Wood, Casey A., presents the report of the subcommittee on blindness produced by the ingestion of methyl or wood alcohol.—J. Am. M. Assoc. 1911, v. 57, p. 73.

Merck, E. (Ann. Rep. 1911, v. 25, p. 143), again calls attention to the danger of using methyl alcohol externally or internally as a sub-

stitute for ethyl alcohol, and outlines the tests devised in the technical laboratory of the German Imperial Treasury and by Hellriegel.

Additional references on the chemistry, toxicology, and uses of methyl alcohol will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Exper. Sta. Rec.*; *Zentralbl. Biochem. & Biophysik*; and *Chem. Centralbl.*

ALOE.

Lloyd, John Uri, outlines the history of aloes and points out that the earliest history of the aloe plant is somewhat obscured by the fact that the name aloe, as used in the Bible, relates to a substance entirely different from the inspissated juice of the various species of the modern plant.—*Bull. Lloyd Libr.* 1911, No. 18, pp. 1–4. See also *Pacific Drug Rev.* 1911, v. 23, June, p. 20.

An unsigned review of the *Ph. Germ. V* (*Pharm. J.* 1911, v. 86, p. 653) points out that aloes is now required to yield not more than 1.5 per cent of ash; no limit was previously given. See also *Chem. & Drug.* 1911, v. 78, p. 351.

Schneider, A., notes that the continuation of the nitric acid test in the *Ph. Germ. V* restricts aloes as formerly to Cape aloes.—*Pharm. Zentralh.* 1911, v. 52, p. 455.

Rusby, H. H., states that American dealers and manufacturers have for years past permitted themselves to be supplied with Moka aloes under the name of Socotrine aloes.—*Oil, Paint, and Drug Reporter*, 1911, v. 80, November 20, p. 28K.

Oesterle, O. A., discusses the chemical relations between chrysophanic acid, aloe emodin, and rhein.—*Arch. Pharm.* 1911, v. 249, pp. 445–449.

Wijnne, A. J., reports a sample of aloes which was found to yield 1.95 per cent of ash, the *Ph. Ndl. IV* limit being 1.5 per cent.—*Pharm. Weekblad*, 1911, v. 48, p. 132.

Bernegau, L. H., reports that all samples of aloes examined were practically strictly U. S. P., except two which tested a trifle higher in moisture than the allowable 10 per cent.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 118.

Schneider, Albert, reports on 3 samples of aloes, 2 of which were adulterated with resin and vegetable tissue.—*Pacific Pharm.* 1911, v. 5, p. 178.

Smith, Kline & French Co. (*Analytical Report*, 1911, p. 9) reports on 2 samples of Curaçao aloes. They contained 38.5 per cent and 35 per cent of matter insoluble in water, and 4.2 and 5 per cent of moisture.

Southall Bros. & Barclay (*Rep.* 1911, Birmingham, 1912, p. 6) report that 7 samples of powdered Barbados aloes contained from 1.64 to 2.88 per cent of ash, and cold water soluble matter 42.9 to 72.3 per cent. Only one sample reached the 70 per cent solubility required by the pharmacopœia.

The Biennial Report of the Inspection of Pharmacies, 1909-1910, states that aloes is found to be of a dirty color, resembling gambier, and lacking its characteristic bitterness. It is true that this product was labeled "veterinary aloes."—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 227; and J. Pharm. Anvers, 1911, v. 67, p. 516.

The Committee of Reference in Pharmacy (Third Report, p. 22) states that in all pills containing aloes the name of the variety will be omitted in agreement with the recommended change in the monograph in aloes. As the pills of Barbados aloes and Socotrine aloes will then differ only in the volatile oil they contain it is recommended that *Pilula Aloes Socotrinæ* be deleted and the formula for *Pilula Aloes Barbadosensis* be retained under the name *Pilula Aloes*. See also Pharm. J. 1911, v. 87, p. 709.

An editorial note (Brit. M. J. 1911, v. 1, p. 1338) discusses the virtues of aloes and of potato flour.

Dixon, W. E., asserts that extract of aloes is less likely to be absorbed than aloin.—Pharm. J. 1911, v. 87, p. 15.

Prochnow, Lucy, in a contribution to our knowledge of the action of popular abortifacients, reports observations on the action of Cape aloes.—Arch. internat. pharmacod. et therap. 1911, v. 21, pp. 313-319.

ALOINUM.

Léger, E., discusses the action of nitric acid on aloins and the constitution of the products formed thereby.—J. Pharm. et Chim. 1911, v. 4, pp. 241-248. See also Bull. Soc. chim. France, 1911, v. 9, pp. 88-97, and Compt. rend. Acad. Sc. 1911, v. 153, p. 114.

Bernegau, L. H., reports that 9 lots of aloin examined were U. S. P. in all particulars, except that they yielded from 0.2 to 0.37 per cent of ash, the U. S. P. requiring no residue on ignition. Allowance should be made for a small amount of ash.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 118.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 7) report that 4 samples of aloin, 98-99 per cent pure, left an ash equal to from 0.28 to 0.4 per cent. It was noticeable in obtaining the melting point that a distinct softening may occur at 116°, with complete fusion at 142°.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 2) does not consider the substitution of aloin for aloes in the official preparations desirable.

Prochnow, Lucy, in a contribution to our knowledge of the action of popular abortifacients, reports observations on the action of aloin.—Arch. internat. pharmacod. et therap. 1911, v. 21, pp. 313-319.

ALTHEA.

John Uri, states that the drug known as marshmallow was described by Dioscorides under the Greek name signifying to heal

It has been used in domestic medicine from the earliest periods.—Bull. Lloyd Libr. 1911, No. 18, p. 4.

Murray, B. L., in discussing the definition for *althæa*, questions the recognition of powdered *althæa*.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 12.

Linke, H., reports finding 4.8 per cent of ash in *althæa*.—Ber. pharm. Gesellsch. 1911, v. 21, p. 195.

Mitlacher, Wilhelm, reports his experience in the cultivation of the *Althæa officinalis*, and points out that this is a perennial plant, the leaves of which may be harvested annually, while the root is gathered after the second year. The plants are apt to be infected by rust and are particularly susceptible to the attack of insects, which devour the leaves.—Pharm. Post, 1911, v. 44, p. 203. See also Bull. sc. pharmacol. 1911, v. 18, Annexes, p. 9.

ALUMEN.

Murray, B. L., points out that the U. S. P., in the description of alum, appears to recognize only "large crystals."—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 13.

Düsterbehn, F., notes that the Ph. Germ. V now describes alum as occurring as a crystalline powder. Its solubility in water is given as 1:11, and it is described as being nearly insoluble in alcohol.—Apoth.-Ztg. 1911, v. 26, p. 135.

The French Syndicate of Wholesale Druggists suggests that in the standard for aluminium sulphate and potassium alum a slight trace of iron be tolerated.—Pharm. J. 1911, v. 86, p. 860.

Lehmann, M., in German patent 239,559, describes a method for making compound alum pencils.—Chem. Repert. 1911, v. 35, p. 554. See also two additional patents.—J. Soc. Chem. Ind. 1911, v. 30, pp. 209 and 1211.

Amos, W. S., asserts that powdered alum, answering all the U. S. P. requirements, except containing a trace of iron, is common.—Proc. Missouri Pharm. Assoc. 1911, p. 98.

"G. B. K.," commenting upon the seizure of 125 barrels of alum alleged to contain 60 mg. of arsenic per kilo, asserts that inasmuch as most people live chiefly on alum the authorities are undoubtedly to be commended for their zeal in protecting the public health.—Midl. Drug. 1911, v. 45, p. 432.

Smith, Kline & French Co. (Analytical Report, 1911, p. 10) reports on 6 samples of alum. One lot was rejected on account of the large amount of insoluble material present. See also Proc. Pennsylvania Pharm. Assoc. 1911, p. 118, and Bull. Am. Pharm. Assoc. 1911, v. 6, p. 346.

Gies, William J., presents some objections to the use of alum baking powder.—J. Am. M. Assoc. 1911, v. 57, pp. 816-821.

Lenz, W., reports some observations on the detection of alum in flour and bread.—Apoth.-Ztg. 1911, v. 26, pp. 687-689.

Rabe, R. P., states that alumen is indicated in cases of chronic pharyngeal catarrh with burning, constriction, and dryness.—Hahnemann. Month. 1911, v. 46, p. 398.

ALUMEN EXSICCATUM.

Düsterbehn, F., points out that the Ph. Germ. V now states that dried alum is soluble in 30 parts of water within 48 hours to a slightly turbid liquid.—Apoth.-Ztg. 1911, q. 26, p. 136.

The French Syndicate of Wholesale Druggists suggests that the standard for dried alum be "soluble in 30 parts water at 15°."—Pharm. J. 1911, v. 86, p. 860.

The Paris Pharmaceutical Society suggests a slight modification in the solubility test for dried alum, making it almost completely soluble in 30 times its weight of water at 15°.—J. Pharm. et Chim. 1911, v. 4, p. 434.

Dunn, W. R., in a paper on home-made chemicals, recommends for the preparation of exsiccated alumen a pure variety of alum or the commercial variety purified by solution, filtration, and recrystallization. The crystals are heated in a porcelain dish until they liquefy and heat (not exceeding 200°) continued until the moisture is completely driven off.—Brit. & Col. Drug. 1911, v. 60, p. 56.

ALUMINI HYDROXIDUM.

Taylor, W. E., contributes a brief note on the precipitation of aluminum hydroxide in the granular form.—Chem. News, 1911, v. 103, p. 169. See also Sugden, Ruth, *ibid.* v. 104, p. 35.

Craig, Thos. J. I., presents a new method for the volumetric determination of free acid and basic alumina in aluminium salts.—J. Soc. Chem. Ind. 1911, v. 30, pp. 184-185.

ALUMINI SULPHAS.

Düsterbehn, F., points out that the formerly made statement that aluminum sulphate is more readily soluble in hot than cold water has not been readmitted to the Ph. Germ. V.—Apoth. Ztg. 1911, v. 26, p. 136.

The Paris Pharmaceutical Society suggests a specific test for aluminum sulphate.—J. Pharm. et Chim. 1911, v. 4, p. 433.

Craig, Hugh, reports the opinion that aluminum sulphate should be retained because of its extensive use, particularly in making solution of aluminum acetate.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 608.

Smith, Kline & French Co. (Analytical Notes, 1911, p. 10) reports that 2 samples of aluminum sulphate were found to be of U. S. P. quality, with the exception of not being completely soluble in 1 part of water.

Chemische Fabrik (Ger. Pat. 232,563, May 27, 1908) describes a process for the preparation of aluminium compounds free from iron.—J. Soc. Chem. Ind. 1911, v. 30, p. 621.

AMMONIUM BIFLUORIDE.

Craig, Hugh, reports the opinion that ammonium bifluoride is used but little and then often with bad results.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 607.

AMMONIUM BROMIDUM.

Düsterbehn, F., points out that the former Ph. Germ. requirement that solutions of ammonium bromide be neutral to litmus paper has not been included in the Ph. Germ. V because of the general recognition of the fact that in solution ammonium bromide undergoes hydrolytic cleavage and reacts acid.—Apoth.-Ztg. 1911, v. 26, p. 136. See also Pharm. J. 1911, v. 86, p. 497.

Linke, H., points out that in titrating ammonium bromide by means of silver nitrate, using potassium chromate as an indicator, an excess of the silver nitrate is necessary to produce a permanent red color.—Ber. pharm. Gesellsch. 1911, v. 21, p. 283.

He also reports that a sample of ammonium bromide examined contained rather more chloride than is permitted by the Ph. Germ. V.—*Ibid.* p. 183.

AMMONIUM CARBONAS.

Düsterbehn, F., points out that the Ph. Germ. V now requires that ammonium carbonate be preserved in well closed containers because of its ready decomposition on exposure to air.—Apoth.-Ztg. 1911, v. 26, p. 136.

Amos, W. S., reports a sample of ammonium carbonate which was found to be only 91.052 per cent pure.—Proc. Missouri Pharm. Assoc. 1911, p. 97.

The Committee of Reference in Pharmacy (Third Report, p. 4) states that further experiments have shown that the titration value proposed in the report, 1910 (see Hyg. Lab. Bull. No. 84, p. 304) is unduly low. The Committee recommends that 1 gm. should require at least 18.2 cc. of the volumetric solution of sulphuric acid for neutralization, corresponding to at least 31 per cent of ammonia, NH_3 . See also Pharm. J. 1911, v. 87, p. 461.

Murray, B. L., in commenting on the shortcomings of the U. S. P., states that powdered ammonium carbonate is to some extent used in the trade, but is not recognized by the U. S. P. and would in fact be excluded by the pharmacopœial definition that ammonium carbonate occurs as "white, hard, translucent striated masses."—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 11.

Bueb, J., and others (Eng. Pat. 22,586, Sept. 29, 1910) describe a process of manufacture of ammonium carbonate by sublimation of a mixture of carbon dioxide and ammonia.—J. Soc. Chem. Ind. 1911, v. 30, p. 421.

Pollard, E. W., in a note on spirit of sal volatile, presents a modified formula for preparations similar to U. S. P. aromatic spirit of ammonia.—Year-Book of Pharmacy, 1911, pp. 408–409. Also Brit. & Col. Drug. 1911, v. 60, p. 81.

Murray, B. L., thinks that for dispensing purposes only translucent ammonium carbonate should be used, and that the U. S. P. should tell whether lump, powdered, or opaque ammonium carbonate is official.—Pharm. Era, 1911, v. 44, p. 11.

Robinson, Beverly, states that the best and safest agents to abort a cold are aromatic spirit of ammonia and sweet spirit of nitre.—Critic and Guide, 1911, v. 14, p. 338.

Rabe, R. P., states that ammonium carbonate is indicated in cases of pulmonary oedema, worse 2 A. M., with relief after expectoration.—Hahnemann. Month. 1911, v. 46, p. 398.

An unsigned abstract (Ind. Hom. Rep.) states that ammonium carbonicum is indicated in hiccup which appears in the morning after being exposed to a chill.—J. Am. Inst. Homœop. 1911, v. 3, p. 76.

AMMONII CHLORIDUM.

Düsterbehn, F., points out that the Ph. Germ. V now describes ammonium chloride as colorless, transparent, hard, odorless, fibrous crystalline pieces or as a white crystalline powder. It is soluble in about 1.3 parts of boiling water, and in about 50 parts of alcohol.—Apoth.-Ztg. 1911, v. 26, p. 136. See Pharm. J. 1911, v. 86, p. 497.

Wegscheider, Rud., reports some observations on the vaporization of ammonium chloride.—Ztschr. physik. Chem. 1911, v. 75, pp. 369–370. See also correction, *ibid.* v. 76, p. 126.

Lloyd, E., and others (Eng. Pat. 26,992, Nov. 21, 1910) describe a process for the production of ammonium chloride from the impure solution of that salt recovered from coke oven gases.—J. Soc. Chem. Ind. 1911, v. 30, p. 1211.

Smith, Kline & French Co. (Analytical Report, 1911, p. 10) reports on 6 samples of ammonium chloride. One contained 2 per cent of sodium chloride and 2 per cent of ammonium sulphate, and one an excessive amount of iron.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, states that there was found as official ammonium chloride a mixture of the chlorides of ammonium and sodium, sold improperly as sal ammoniac for electric batteries.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 232. Also J. Pharm. Anvers, 1911, v. 67, p. 520.

Hennell (Eclectic M. J., *Nouv. Rem.* 1911, 28, 139) states that a dose of 30 to 60 grains of ammonium chloride, followed by copious draughts of water, is stated to be an effective remedy for drunkenness; not only is the patient sobered, but even delirium tremens may sometimes be prevented.—*Pharm. J.* 1911, v. 86, p. 808.

AMMONII IODIDUM.

The Paris Pharmaceutical Society suggests that 1 gm. of ammonium iodide be volatilizable without leaving any appreciable residue, the term "residue" to be defined in the preface to the Codex.—*J. Pharm. et Chim.* 1911, v. 4, p. 434.

The French Syndicate of Wholesale Druggists suggests that ammonium iodide may yield a residue of 10 per cent of its total weight and show a slight trace of sulphates.—*Pharm. J.* 1911, v. 86, p. 860.

Dunn, W. R., in a paper on home-made chemicals, presents a method for the preparation of ammonium iodide, by the interaction of ammonium carbonate and a solution of ferrous iodide.—*Brit. & Col. Drug.* 1911, v. 60, p. 56.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 8) point out that thio compounds sometimes contaminate this salt. One sample had a purity of 99.2 per cent, with moisture 0.8 per cent.

An unsigned abstract (*Bull. Pharm.*) recommends that a cube of ammonium carbonate in a piece of cheesecloth be introduced into the ammonium iodide stock bottle. The product will always be white.—*Pract. Drug.* 1911, v. 29, February, p. 35.

AMMONII VALERAS.

The Paris Pharmaceutical Society suggests that 1 gm. of ammonium valerate should be volatilizable without leaving any appreciable residue.—*J. Pharm. et Chim.* 1911, v. 4, p. 434.

The French Syndicate of Wholesale Druggists suggests that ammonium valerianate may yield a residue of 10 per cent of its total weight and an acid reaction.—*Pharm. J.* 1911, v. 86, p. 860.

AMYGDALA AMARA.

Lloyd, John Uri, states that the seeds of bitter almonds, known to be poisonous in the days of antiquity, were yet used medicinally throughout the Middle Ages.—*Bull. Lloyd Libr.* 1911, No. 18, p. 4.

Wirth, P. H., reports on the examination of hydrocyanic acid, benzaldehyde solution, and of cherry laurel water.—*Arch. Pharm.* 1911, v. 249, pp. 382–407.

Rosenthaler, L., comments on the results obtained by Wirth.—*Ibid.* pp. 510–511.

AMYGDALA DULCIS.

Lloyd, John Uri, states that the almond is one of the trees mentioned in the Old Testament and is frequently referred to by Theophrastus and others of the early writers.—Bull. Lloyd Libr. 1911, No. 18, pp. 4-5.

Tunmann, O., in a report on the drug trade in Hamburg, states that good varieties of sweet almonds are being imported from Portugal, Spain, France, and Italy, while the less desirable varieties come from Persia, Syria, and Greece. Bitter almonds come from North Africa and Sicily. The annual production usually varies from 35 to 50 million kilogrammes.—Apoth.-Ztg. 1911, v. 26, p. 568.

Hannig, E., calls attention to the structural characteristics of almond seed, and their differentiation from other related seeds.—Apoth.-Ztg. 1911, v. 26, p. 546. Also Ztschr. Unters. Nahr. u. Genusssm. 1911, v. 21, pp. 577-586.

Osborne, Thomas B., discusses the general character and the amount of proteins found in almonds.—Ergeb. Physiol. 1910, v. 10, pp. 191-195.

AMYLIS NITRIS.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 497) points out that the specific gravity is somewhat raised (0.875 to 0.885, instead of 0.870 to 0.880), but the boiling range is lowered (95° to 97° instead of 97° to 99°).

Rabe, R. P., states that amyl nitrite 30 is indicated in cases of climacteric flushings and palpitation.—Hahnemann. Month. 1911, v. 46, p. 398.

von den Velden, R., discusses the hæmostyptic action of amyl nitrite.—Therap. Monatsh. 1911, v. 25, p. 287.

Hare, Francis, presents a brief pharmacodynamic argument for the treatment of menorrhagia in virgins by amyl nitrite.—Brit. M. J. 1911, v. 2, p. 110.

AMYLUM.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 653) points out that the loss of starch on drying at 100° is now limited to 12 per cent; the ash limit is 1 per cent, as formerly.

Hoyer, Otto, reports a comprehensive investigation of the comparative size of wheat and of potato starch.—Ztschr. allg. österr. Apoth.-Ver. 1911, v. 49, pp. 227-230.

Lloyd, Hoyer, reports observations on the adsorption of some substances by starches, and points out that the adsorption of hydrochloric acid, sodium hydroxide, and sodium chloride, by starch varies with different starches but not as much as would be expected.—J. Am. Chem. Soc. 1911, v. 33, pp. 1213-1226.

Ferraud and Bloch present a communication on the action of soda on starch.—Bull. sc. pharmacol. 1911, v. 18, pp. 207–213. Also Bull. pharm. Sud-Est, 1911, v. 16, pp. 293–300.

Reed, Lester, presents a brief note on the approximate estimation of starch by iodine.—Chem. News, v. 104, p. 271.

Massol, L., discusses the action of ultra-violet rays on starch.—Compt. rend. Acad. sc. 1911, v. 152, p. 902.

The Biennial Report of the Inspection of Pharmacies, 1909–10, states that starch powder is rarely of the degree of fineness prescribed by the Pharmacopœia.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 229. Also J. Pharm. Anvers, 1911, v. 67, p. 517.

Dawson, E. S., suggests that in the formula for glyceritum amyli, if it is to be retained, the starch should be directed to be mixed with the water, the glycerin added, and then heated carefully till starch granules are ruptured. By this method a homogeneous product results.—Proc. New York Pharm. Assoc. 1911, p. 92.

Pearson, W. A., discusses the digestion of starch, and reviews some of the literature on the subject.—Hahnemann. Month. 1911, v. 46, pp. 451–457.

van Laer, H., discusses the saccharrification of starch under the influence of acids.—Bull. Soc. chim. Belg. 1911, v. 25, pp. 249–264.

Schmidt, Ch. Ed., in a contribution on the study of the action of *Bacterium coli* and of other intestinal bacteria on the carbohydrates, discusses the fermentation of starch and dextrose.—Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, pp. 629–631.

Herstein, B., in a review of the history of glucose and the early history of starch, points out that the year 1911 is the centenary of the discovery of the inversion of starch to glucose by means of dilute acids. He also notes that starch as such was known to the ancients. Its preparation from the grain by a process of partial fermentation is described in the first book ever published on agriculture (184 B. C.).—J. Ind. & Eng. Chem. 1911, v. 3, pp. 158–168.

Additional references on the nature and properties of starch will be found in Chem. Abstr.; Zentralbl. Biochem. u. Biophysik; Ztschr. Unters. Nahr. u. Genussm.; and Chem. Centralbl.

ANISUM.

Lloyd, John Uri, states that anise is among the oldest known medicines and spices.—Bull. Lloyd Libr. 1911, No. 18, p. 5.

Gehe & Co. (Handelsbericht, 1911, p. 77) point out that the anise harvest in Russia has been fairly satisfactory though the growers were slow in marketing their crop.

Heinrich Haensel (Bericht, Oct.-Apr., 1910–11, p. 7) reports that the Russian crop of anise seed is unusually large, though the drug, because of unfavorable weather at the time of ripening, is off color.

Rusby, H. H., states that anise is extremely liable to contamination with large amounts of stems, gravel, sand, dust, weed seeds, and other impurities.—Oil, Paint and Drug Reporter, 1911, v. 80, Nov. 20, p. 28K.

Hartwich, C., in a review of the Ph. Germ. V, points out that anise is now described as grayish-green or grayish-brown. He regrets that a more satisfactory test has not been added for the presence of conium, and criticizes the microscopic description of anise.—Apoth.-Ztg. 1911, v. 26, p. 21.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 653) points out that an ash limit of 10 per cent is introduced for the powder.

Howard, Charles D., reports that the ash content of 4 samples of ground anise seed ranged from 10 per cent to 19.27 per cent. One sample of clean unground seed was found to contain but 7.90 per cent of mineral matter.—New Hampshire San. Bull. 1911, v. 3, p. 254.

Umney and Bennett state that it may yet be decided that an ash percentage is highly desirable for anise. Samples examined during the past year gave: ash, whole fruits, 6.8 to 35.2; ether extract, nil; powder, 6.2 to 22.7; ether extract, 21.6 to 26.2. They think the ash limit should be given as a minimum and at 9, if not at even 8 per cent.—Pharm. J. 1911, v. 86, p. 596. See also Chem. & Drug. 1911, v. 78, p. 674.

Rosenthaler, L., calls attention to the nature of the material obtained from anise by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, p. 345.

Umney and Bennett report that 19 samples of anise yielded from 6.2 to 28.8 per cent of ash. They consider that an ash limit of from 8 to 9 per cent might be fixed for the pharmacopœia.—Drug Topics, 1911, v. 26, p. 148.

The Biennial Report of the Inspection of Pharmacies, 1909-1910, states that powdered anise is generally better than formerly. The Russian anise is poorly picked and mixed with earth.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 228. Also J. Pharm. Anvers, 1911, v. 67, p. 516.

"D. B." states that, according to W. Mitlacher, star anise has been adulterated with the poisonous fruit of Japan anise.—Bull. sc. pharmacol. 1911, v. 18, Annexes, p. 9.

An editorial (Chem. & Drug. 1911, v. 78, p. 669) notes that for veterinary purposes the finest anise, answering the requirements of the Ph. Brit., is not needed, but points out the possible complications which may arise from lowering the standard. See also p. 673.

ANTHEMIS.

Lloyd, John Uri, states that *anthemis nobilis* has been cultivated for centuries in English gardens and used in domestic medicine from the beginning of the records.—Bull. Lloyd Libr. 1911, No. 18, p. 5.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, p. 32) report that owing to the exceptional heat and drought which visited England this summer in common with other countries, it was impossible for the English chamomile cultures to develop in a satisfactory manner, with the result that we are now faced with a complete failure of the crop of Roman chamomile.

"D. B." reports that, according to W. Mitlacher, the Austrian inspection of pharmacies found floral peduncles of anthemis and chrysanthemum in chamomile.—Bull. sc. pharmacol. 1911, v. 18, Annexes, p. 9.

Schimmel & Co. (Semi-Annual Report, April, 1911, p. 41) point out that the various parcels of chamomile observed by them during the course of the winter gave, on an average, a very unsatisfactory yield of oil.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 24) report that two parcels of English chamomile oil examined gave very similar results: specific gravity, 0.9185 and 0.9180, refractive index, 1.4449 and 1.4440. They again note that the specific gravity in each case is higher than the maximum limit proposed.

ANTIMONII ET POTASSII TARTRAS.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 125) points out that tartarated antimony is described as containing 99.7 per cent of pure salt.

The Paris Pharmaceutical Society suggests that tartar emetic be required to dissolve in 17, instead of 15, parts of water and that but one arsenic test be prescribed. They would recommend the omission of the Marsh test.—J. Pharm. et Chim. 1911, v. 4, p. 540.

Smith, Kline & French Co. (Analytical Report, 1911, p. 11) report that of 5 samples of antimony and potassium tartrate examined, 3 were below the U. S. P. requirements. The strength of the samples varied from 98 to 99.85 per cent. See also Proc. Pennsylvania Pharm. Assoc. 1911, p. 118.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 10-11) point out that the amount of combined water in the salt would seem to be in some doubt. They report 3 samples, none of which answered the Ph. Brit. test as regards noneffervescence with sodium bicarbonate.

Cloetta, M., reports a study on the behavior of antimony preparations in the body and habituation to the same.—Arch. exper. Path. u. Pharmacol. 1910-11, v. 64, pp. 352-361.

Morgan and Micklethwait, in a contribution on organic derivatives of antimony, discuss the orienting influence of antimonious substituents in the benzene nucleus.—J. Chem. Soc. Lond. 1911, v. 99, pp. 2286-2298.

Camac, C. N. B., reports toxic symptoms from the use of intramuscular and intravenous injections of antimony in trypanosomiasis. Both parasites and fever, however, have been absent for one and a half years.—*Brit. M. J.* 1911, v. 2, p. 104.

Fisher, Edgar A., states that antimonium tartaricum is used in the later stage of pneumonia when resolution has begun. It is more often useful for old people and children than for adults, and in pneumonia complicating whooping cough, emphysema, or delirium tremens.—*J. Therap. & Diet.* 1911, v. 5, p. 201.

An unsigned abstract (*Iowa Med. J.*) states that coughing and gasping in alternation, a loose cough with little expectoration, much rattling of mucus in trachea, are indications for tartar emetic.—*J. Am. Inst. Homœop.* 1911, v. 3, p. 76.

ANTIPYRINA.

Lloyd, Gordon, states that antipyrine was discovered in 1884 by Knorr.—*Rocky Mountain Druggist*, 1911, v. 25, March, p. 43.

An editorial (*Pharm. Ztg.* 1911, v. 56, p. 572) points out that the Ph. Germ. V includes antipyrin as a synonym for pyrazolonum phenyldimethylicum.

Kahn, Joseph, discusses the chemistry of antipyrine, calls attention to its relation to pyramidon and presents a table giving distinctive tests for antipyrine and pyramidon.—*Proc. New York Pharm. Assoc.* 1911, pp. 68–69.

Düsterbehn, F., in a review of the Ph. Germ. V points out that pyrazolon phenyldimethylate is now described as being soluble in 1 part of water, 1 part of alcohol, 1.5 parts of chloroform, and in 80 parts of ether.—*Apoth.-Ztg.* 1911, v. 26, p. 241. See also *Pharm. J.* 1911, v. 86, p. 582; and *Chem. & Drug.* 1911, v. 78, p. 124.

The Committee of Reference in Pharmacy (Third Report, p. 22) recommends that the melting point of phenazone be given as 111° to 113°; the solubility in water as 1 in 1.2, and in 90 per cent alcohol as 1 in 1.3. See also *Pharm. J.* 1911, v. 87, p. 709.

Emery, W. O., in the referee report on headache mixtures, outlines a method for determining antipyrine.—*Proc. Assoc. Off. Agric. Chem.* 1911, 28th Ann. Conv. pp. 236–241 (*Bull. Bur. Chem. U. S. Dept. Agric.* 1912, No. 152).

Mindes, J., notes that a trace of fuming nitric acid produces a green color in an aqueous solution of antipyrine. If additional acid is added, the color turns to red, and, on heating, to dark red.—*Pharm. Post*, 1911, v. 44, p. 680.

Buckner, J. G., outlines some modifications in the tests for acetanilide, phenacetin, and antipyrine, which he has found to be of advantage.—*Proc. Texas Pharm. Assoc.* p. 110–113.

Brown, Lucius P., points out that under the food and drugs law of Tennessee, as amended, the presence of antipyrine must be announced on the label.—*Proc. Tennessee Pharm. Assoc.* 1911, p. 90.

Cruveilhier contributes a note on anaphylaxis induced by antipyrine.—*Compt. rend. Soc. Biol.* 1911, v. 71, p. 223.

Cervello, Carlo, in a discussion of the influence of antipyretics on the albuminoids of the blood serum, reports observations on the influence of small doses of antipyrine on the blood serum of dogs.—*Arch. exper. Path. u. Pharmacol.* 1910-11, v. 64, pp. 403-406.

Tachau, Hermann, reports finding antipyrine with readiness in the perspiration of patients taking that drug in doses of one gramme or more.—*Ibid.* v. 66, pp. 341-343.

Nikolaides and Dontas, in observations on the irritability of the heat center, report observations on the stimulating action of antipyrine.—*Zentralbl. Physiol.* 1911, v. 25, pp. 192-199.

Piccinini, Guido M., discusses the variations in the viscosity and cryoscopy of the blood following the use of antipyrine, phenacetin, and antifebrin.—*Arch. farmacol. Sper.* 1911, v. 12, pp. 193-209.

An editorial note (*J. Am. M. Assoc.* 1911, v. 56, p. 287) discusses the incompatibility of antipyrine, calomel, and sodium bicarbonate.

APIOL.

Gehe & Co. (*Handelsbericht*, 1911, p. 123) report that crystalline apiol (Ph. Fr. V) has been repeatedly inquired for, but no appreciable quantities of the article could be obtained.

Glatard (*J. Méd. et Chir. prat.* September, 1910) reports a case of intoxication from apiol, taken as an abortifacient.—*Bull. sc. pharmacol.* 1911, v. 18, p. 695.

APOCYNUM.

Lloyd, John Uri, points out that American "Indian hemp" is the name given to various species and varieties of apocynum in contradistinction to the true Indian hemp of India. The root has been used in domestic medicine since the days of the earliest settlers who learned of its qualities from the Indians.—*Bull. Lloyd Libr.* 1911, No. 18, p. 5.

Rusby, H. H., knows of no records which prove that *A. cannabinum* is an efficient species and asserts that there are none showing that the other efficient species, if any, are closely allied to it.—*Pharm. Era*, 1911, v. 44, p. 94.

The editor of the "Therapeutics" column (*J. Am. M. Assoc.* 1911, v. 56, p. 967) states that it would be well to omit *Apocynum androsaemifolium* from the Pharmacopœia unless it can be assured that the *A. cannabinum* is the only apocynum used, and that there can be some standard of activity.

Wood, H. C., jr., reports that the adoption of a physiologic method of assay for apocynum would be advisable.—*Ibid.* p. 606.

Forbush, A. Waldo, declares that the keynote of apocynum is atony, a condition permitting leakage from the circulatory system.—*J. Therap. & Diet.* 1911, v. 5, pp. 10–14.

MacFarlan, Malcolm, discusses the action of apocynum cannabinum in some forms of Bright's disease.—*J. Am. Inst. Homœop.* 1911, v. 3, p. 914.

Coleman, D. E. S., discusses the use of apocynum cannabinum as an antidote for alcohol poisoning.—*Eclectic Med. Glean.* 1911, v. 7, pp. 424–425.

APOMORPHINÆ HYDROCHLORIDUM.

Lloyd, Gordon, states that apomorphine was discovered by Matthiessen and Wright in 1869, but its great emetic value was not recognized until 1882.—*Rocky Mountain Druggist*, 1911, v. 25, March, p. 43.

Düsterbehn, F., points out that the Ph. Germ. V states that apomorphine hydrochloride is soluble in 50 parts of water, and that on standing exposed to the air these solutions gradually assume a green color.—*Apoth.-Ztg.* 1911, v. 26, p. 136. See also *Pharm. J.* 1911, v. 86, p. 497.

Schneider, A., discusses the Ph. Germ. V requirements for apomorphine hydrochloride, and calls attention to some of the recent articles on this substance.—*Pharm. Zentralh.* 1911, v. 52, pp. 537–538.

Bolland, A., reports observations on the microscopical behavior of apomorphine.—*Monatsh. Chem.* 1911, v. 32, p. 128.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 11) report that the samples of apomorphine hydrochloride examined were found to give, with a very small addition of ferric chloride solution, the decided greenish-blue color characteristic of morphine, although with a larger addition they gave the correct red color. The trimorphine salts were entirely absent.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, notes that apomorphine hydrochloride was found old, poorly crystallized, and of a yellow color.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 232. Also *J. Pharm. Anvers*, 1911, v. 67, p. 521.

Corbelli, Ubaldo, discusses the preservation of hypodermic solutions of apomorphine hydrochloride by means of hypophosphoric acid.—*Boll. chim. farm.* 1911, v. 50, pp. 871–873.

Kalal, F. J., reports on the use of apomorphine as an antidote in strychnine poisoning.—*Am. J. Clin. Med.* 1911, v. 18, p. 542.

Eggleston and Hatcher report observations to determine the seat of the emetic action of apomorphine.—*Pharmacol. & Exper. Therap.* 1911–1912, v. 3, pp. 551–580.

Henschen, F. E., states that apomorphine, given hypodermically, will produce sleep fully as well as morphine, and there is never any danger of producing mental or motor excitation, as seen after the use of morphine.—*Eclectic Med. Glean.* 1911, v. 7, p. 611.

Riedel's *Berichte* (1911, p. 47) quotes Harnack and Hildebrandt as recommending that apomorphine solution which readily becomes green should not be used.

AQUÆ.

Diekman, George C., reports the recommendation that instead of having formulas for the various waters in the U. S. P. a general formula be included.—*Proc. New York Pharm. Assoc.* 1911, p. 80.

Utech, P. Henry, prepares several aromatic medicated waters by simple agitation of the oil with hot water, allowing the fluid to stand for several days or weeks, as the case may be. The product is then poured upon a wet filter, which retains the excess of oil.—*Drug Topics*, 1911, v. 26, p. 279.

Osterlund, O. W., suggests the use of kieselguhr as a clarifying agent in the preparation of the aromatic waters.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 31.

Richardson, W. A., states that, since he has been engaged in the drug business, the diluent or vehicle used in extemporaneous prescriptions has changed from aromatic waters and syrups to elixirs and cordials, and that the use of the latter preparations is now altogether too common.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 702.

AQUA.

Blacher, C., reviews some of the recent literature relating to the chemistry of water.—*Chem. Ztg.* 1911, v. 35, pp. 370-372, 390-392.

Hungerford, Churchill, presents some observations on the problems of water filtration for industrial purposes.—*J. Frankl. Inst.* 1911, v. 171, pp. 261-276.

Berkely and Appleby report observations on the boiling point of water and the variations caused by the height of the column of water.—*Proc. Roy. Soc. Lond.* 1911, v. 85, pp. 477-489.

Baxter, Burgess, and Daudt report observations on the refractive index of water.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 893-901.

Johnson, A. E., calls attention very briefly to the recent developments of the phenolsulphonic acid method for the determination of nitrates in water.—*Chem. News*, 1911, v. 104, p. 235.

Utz reviews the progress made in the examination of water during the years 1909-1910.—*Oesterr. Chem.-Ztg.* 1911, v. 14, pp. 191-192.

Zerewitinoff, Th., discusses the quantitative estimation of water in various substances by means of magnesium containing organic combinations.—*Ztschr. anal. Chem.* 1911, v. 50, pp. 680-691.

Little, Arthur D., expresses the belief that the chemical and biological study of public water supplies has been the means of saving countless lives throughout the world and has led to such understanding and made possible such control of sources of pollution as almost to justify the statement that for every case of typhoid fever some one should be hanged.—*Drugs Topics*, 1911, v. 26, p. 293.

König, Kuhlmann, and Thienemann discuss the chemical composition and the biologic behavior of surface waters.—*Ztschr. Unters. Nahr. u. Genussm.* 1911, v. 22, pp. 137–154.

Hofman, J. J., discusses the examination of mineral waters and presents tables showing the composition of a number of widely used waters of this type.—*Pharm. Weekblad*, 1911, v. 48, pp. 1003–1014.

An editorial note (*Montreal Pharm. J.* 1911, v. 22, p. 98) states that lukewarm water is now being used as an anæsthetic in operations for appendicitis.

Additional references on the chemistry, purification, and uses of water will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Exper. Sta. Rec.*; *Zentralbl. Biochem. u. Biophysik*; *Hyg. Rundschau*; and *Chem. Centralbl.*

AQUA AMMONIÆ.

Düsterbehn, F., notes that the Ph. Germ. V requires that ammonia water contain from 9.94 to 10 per cent of ammonia and that the specific gravity do not vary beyond 0.959 and 0.960.—*Apoth.-Ztg.* 1911, v. 26, p. 214.

Frerichs, F. W., discusses with illustrations, the manufacture, and testing of shipping cylinders for anhydrous ammonia.—*Tr. Am. Inst. Chem. Eng.* 1911, v. 4, 1912, pp. 175–193.

McDermott, F. Alex., describes and illustrates the direct synthesis of ammonia from its elements.—*Sc. Am. Suppl.* 1911, v. 72, pp. 276–277. See also *J. Am. Chem. Soc.* 1911, v. 33, pp. 515–517.

Jones, Louis Cleveland, discusses the manufacture of ammonia in by-product coke ovens.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 589–594.

Carlo, N., discusses the production of ammonia from peat.—*Chem. Ztg.* 1911, v. 35, pp. 505–507, 515–516.

Tufts, C. G., discusses the commercial production of ammonia and reviews some of the recent literature on the subject.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 295–299.

For references to patents on the production of ammonia, see *J. Soc. Chem. Ind.* 1911, v. 30, pp. 26, 360, 620, 747, 1115, and 1211.

Brown, James A., discusses the recovery, concentration, and testing of ammonia.—*Chem. Eng.* 1911, v. 14, pp. 456–461.

Artmann, P., discusses the estimation of minute quantities of ammonia.—*Chem. Ztg.* 1911, v. 35, pp. 50–51, 64–65.

Smits and Postma discuss the relation of water to ammonia and the nature of a mixture of the two substances at varying temperatures.—*Ztschr. anorg. Chem.* 1911, v. 71, pp. 250–253.

Table showing some of the analytical results reported for ammonia water.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Army, H. V.	12	9	Proc. Ohio Pharm. Assoc. 1911, p. 126.
Bachman, Gustav.	3	3	Proc. Minnesota Pharm. Assoc. 1911, p. 101.
Brown, Luchus P.	30	23	Rep. Tennessee Bd. Health 1911, p. 129.
Sayre, L. E.	5	5	Bull. Kansas Bd. Health, 1911, v. 7, pp. 6 ff.

The Biennial Report of the Inspection of Pharmacies, 1909-1910, states that ammonia is frequently contaminated by empyreumatic matter and of very variable concentration.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 232. See also J. Pharm. Anvers, 1911, v. 67, p. 520.

Utech, P. Henry, states that an ammonia liniment, possessing superior advantages to the one now official, is made by mixing sesame oil, 75 parts, and ammonia water, 25 parts.—Western Druggist, 1911, v. 33, p. 14.

Alcock, F. H., contributes a note on the solidification of ammonia liniment and its possible avoidance.—Pharm. J. 1911, v. 87, p. 171. Also Chem. & Drug. 1911, v. 79, p. 213; and Brit. & Col. Drug. 1911, v. 60, p. 85.

"W. A. S." presents a formula for ammonia liniment which he says keeps a nice consistence and does not separate.—Pharm. J. 1911, v. 87, p. 399.

AQUA AMMONIÆ FORTIOR.

The Committee of Reference in Pharmacy (Third Report, p. 6) recommends that the specific gravity of liquor ammoniæ fortis be corrected to 0.888, corresponding to 32.5 per cent of NH_3 by weight. Sulphuric acid is substituted for hydrochloric acid in the test for tarry matters, and the liquor should leave no appreciable residue after evaporation on a water bath. See also Pharm. J. 1911, v. 87, p. 556.

Lomax, A., recommends that in opening containers of strong ammonia water a wet towel be wrapped around the bottle, which should be set outside in the shade for at least half an hour, keeping the towel constantly wet.—Bull. Pharm. 1911, v. 25, p. 211.

Table showing some of the analytical results reported for stronger ammonia water.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Pearson, W. A.	1	1	Proc. Pennsylvania Pharm. Assoc. 1911, p. 113.
Bachman, Gustav.	1	1	Proc. Minnesota Pharm. Assoc. 1911, p. 101.
Brown, Luchus P.	7	7	Rep. Tennessee Bd. Health 1911, p. 129.
Smith, Kline & French Co ...	73	6	Analytical Report, 1911, p. 12.
Weinstein, Joseph.	5	5	Proc. New York Pharm. Assoc. 1911, p. 150.

AQUA AMYGDALÆ AMARÆ.

Öfverberg, Frans, presents a note on bitter almond water.—Svensk. farm. Tidskr. 1911, v. 15, p. 319. See also 337, 358.

Wirth, P. H., reports some observations on the determination of hydrocyanic acid and benzaldehyde in aqueous solutions.—Pharm. Weekblad, 1911, v. 48, pp. 1049–1055, 1065–1078.

AQUA CAMPHORÆ.

Farrell, T. H., suggests a change in the method of making camphor water, the present method resulting in a solution which is irritating to the eyes.—Proc. New York Pharm. Assoc. 1911, p. 93.

AQUA CINNAMOMI.

Tait, J., presents a note on decomposition products in distilled cinnamon water and suggests the official recognition of a simple solution of oil in water.—Pharm. J. 1911, v. 87, p. 886. Also Chem. & Drug. 1911, v. 79, p. 956; and Brit. & Col. Drug. 1911, v. 60, p. 530.

AQUA DESTILLATA.

Stokes, F. J., describes and illustrates an automatic water still.—Am. J. Pharm. 1911, v. 83, pp. 115–116.

An unsigned article (N. A. R. D. Notes 1911, v. 12, p. 17) points out that an ordinary block tin still is inexpensive and should find a place in the laboratory of every well equipped pharmacy.

Linke, H., notes that in testing distilled water for inorganic salts it is preferable to use 100 cc. instead of the 10 cc. recommended by the Ph. Germ. V.—Ber. pharm. Gesellsch. 1911, v. 21, p. 284.

Cook, Alfred N., cautions druggists against the use of well water or rain water, in place of distilled, and states that the Pharmacopœia and the National Formulary both require distilled water. He fears that the distilled water which some of the druggists have been using is pure, unadulterated rain water. So many pharmacists are found to be "just out" of distilled water that it has aroused suspicion.—Bull. South Dakota Food & Drug Dept. 1911, No. 23, p. 2.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, calls attention to the impure commercial distilled waters in which vegetation easily develops.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 237. Also J. Pharm. Anvers, 1911, v. 67, p. 561.

AQUA HYDROGENII DIOXIDI.

Lloyd, Gordon, states that peroxide of hydrogen was first prepared by Thenard in 1818.—Rocky Mountain Druggist, 1911, v. 25, Mar., p. 43.

Düsterbehn, F., notes that the Ph. Germ. V requires that solution of hydrogen dioxide occur as a clear, colorless, odorless aqueous solution, having a slightly bitter taste and a slightly acid reaction.—Apoth.-Ztg. 1911, v. 26, p. 202. See also Pharm. J. 1911, v. 86, p. 581; and Chem. & Drug. 1911, v. 78, p. 13.

The Committee of Reference in Pharmacy (Third Report, p. 7) suggests an assay process for liquor hydrogenii peroxidi. A limit for acidity (0.1 per cent, calculated as H_2PO_4) is recommended, and the limit for residue on evaporation is fixed at 0.75 per cent. See also Pharm. J. 1911, v. 87, p. 590.

Dohme and Engelhardt believe that the method of determining acidity should be revised, and suggest evaporating the solution in a platinum dish, or by adding a suitable catalyzer, such as platinum black, etc.—Am. J. Pharm. 1911, v. 83, p. 519.

Stockinger, Otto, outlines a method for determining the acidity of solution of hydrogen dioxide. He believes that titration in the cold is more nearly indicative of the real excess of irritating acid than is the hot method.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 310.

v. Sobbe, O., outlines a new reaction for the detection of hydrogen dioxide which is said to yield with ammoniacal silver nitrate solution a characteristic gray precipitate insoluble in hydrochloric acid.—Chem. Ztg. 1911, v. 35, p. 898.

Riesenfeld, E. H., replies to the paper by Spitalsky [Hyg. Lab. Bull. 84, p. 316] on the catalysis of hydrogen dioxide.—Ber. deutsch. chem. gesellsch. 1911, v. 44, pp. 147–150.

Fischer and Wolf discuss the synthesis of high percentage hydrogen peroxide by means of the silent electrical discharge.—*Ibid.* pp. 2956–2965.

Nussbaum reviews an article on the synthetic production of hydrogen dioxide.—Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, p. 390.

For references to patents on the preparation of hydrogen dioxide see J. Soc. Chem. Ind. 1911, v. 30, pp. 361, 422, 620, 685, 746, 1116, 1212, 1409, and 1451.

An editorial (Bull. Pharm. 1911, v. 25, p. 224) notes that according to a ruling of the Ohio State Board of Pharmacy hydrogen peroxide can be sold legally only by registered pharmacists.

An editorial note (Drug. Circ. 1911, v. 55, p. 7) states that the advice to keep this solution in tightly corked bottles is bad. If it is so kept, in dark closets or elsewhere, it may explode when disturbed or when the bottle is heated by the touch of a hand. The proper way to keep this solution is in such manner that there will be no explosion; that is, not closely confined. Close confinement does not retard the separation of a portion of the oxygen.

Table showing some of the analytical results reported for hydrogen peroxide.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Army, H. V.	15	3	Proc. Ohio Pharm. Assoc. 1911, p. 127.
Bachman, Gustav.	2	1	Proc. Minnesota Pharm. Assoc. 1911, p. 101.
Dunlap, Renick W.	6	1	Rep. Ohio Dairy & Food Com. 1910, 1911, p. 48.
Street, John Phillips.	1	1	Rep. Connecticut Agric. Exper. Sta. for 1910, 1911, p. 582.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 36) report that many samples of hydrogen peroxide met with have proved to contain an amount of nonvolatile residue in excess of the maximum official limit; figures as high as 0.71 per cent have been obtained in some instances.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, notes that the conditions with regard to hydrogen dioxide are better, but nevertheless many samples do not have the required oxygen strength.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 234. Also J. Pharm. Anvers, 1911, v. 67, p. 523.

Hanus and Kallauner discuss the action of hydrogen peroxide and of sodium peroxide on bismuth salts.—Ztschr. anorg. Chem. 1911, v. 70, pp. 232–239.

Brown, W. H., contributes a note on the value of hydrogen peroxide in the microchemical determination of iron, with illustrations.—J. Exper. M. 1911, v. 13, pp. 477–485.

Neuberg and Miura report some observations on the hydrolyzing action of hydrogen dioxide, particularly its action on ovalbumin, gelatin, starch, and yeast nucleinic acid.—Biochem. Ztschr. 1911, v. 36, pp. 37–43.

Serger, H., discusses the utilization of hydrogen dioxide as a chemical preservative for food stuffs, particularly milk.—Chem. Ztg. 1911, v. 35, p. 1152.

An editorial note (Pract. Drug. 1911, v. 29, Aug. p. 24) calls attention to a reported case in which hydrogen peroxide was applied externally while potassium iodide was given internally. The result was a severe burning in the skin.

Hall, G. W., reports successful results in the treatment of gastric hyperacidity with hydrogen peroxide.—Boston M. & S. J. 1911, v. 164, p. 846. See also p. 684.

An editorial (N. York M. J. 1911, v. 93, p. 131) calls attention to favorable results in the treatment of lupus vulgaris with hydrogen dioxide and outlines the details of the method.

Additional references on the chemistry, pharmacology, and therapeutic uses of solution of hydrogen dioxide will be found in Index

Med.; J. Am. M. Assoc.; Chem. Abstr.; Exper. Sta. Rec.; Zentralbl. Biochem. u. Biophysik; and Chem. Centralbl.

AQUA ROSÆ.

Rauschenberg, Sidney, outlines a method for making rose water from oil of rose.—Rev. Am. Farm. y Med. 1910–11, v. 15, Sept. p. 8.

Carpenter, H. S., submits a formula for making rose water which he considers every bit as satisfactory as the U. S. P. product and which costs but 20 cents a gallon.—Bull. Pharm. 1911, v. 25, p. 119.

ARGENTI NITRAS.

Düsterbehn, F., points out that the Ph. Germ. V describes silver nitrate as occurring in white transparent sticks, melting at about 200°. The solubility in water is given as 1:14.—Apoth.-Ztg. 1911, v. 26, p. 145. See also Pharm. J. 1911, v. 86, p. 497; and Pharm. Zentralh. 1911, v. 52, p. 539.

White, Edmund, describes silver nitrate, discusses the tests for impurities, and points out that the silver nitrate of commerce is usually very pure, but sometimes contains a trace of alkali salts and copper.—Pharm. J. 1911, v. 86, p. 250.

Steinmann, A., presents a note on the assay of lunar caustic.—Ann. chim. analyt. 1911, v. 16, pp. 165–167.

Baxter, Gregory Paul, in a study on the revision of the atomic weights of silver and iodine, reports observations on the relationship of silver to iodine.—Ztschr. anorg. Chem. 1911, v. 70, pp. 34–48.

Roshdestwensky and Lewis, in a discussion on the electro-chemistry of solutions in acetone, point out that silver nitrate in acetone is only slightly dissociated.—J. Chem. Soc. Lond. 1911, v. 99, pp. 2138–2147.

Austin, Percy Corlett, reports observations on the interaction of silver nitrate and potassium persulphate and its catalytic effect in the oxidation of organic substances.—J. Chem. Soc. Lond. 1911, v. 99, pp. 262–266.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, states that while the crystallized nitrate is always pure the fused nitrate sometimes contains a large excess of potassium nitrate.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 232. Also J. Pharm. Anvers, 1911, v. 67, p. 521.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 63) report that 1 sample of silver nitrate contained 21.5 per cent of potassium nitrate.

Egan, Thos. A., recommends the use of kaolin with resin cerate, vaselin, or lanolin, as an excipient in making pills of silver nitrate.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 292.

An unsigned article ("Das Rezept"; Vierteljahrsschr. Prakt. Pharm. 1909, part I) states that silver nitrate spots may be removed quickly,

although not altogether without danger, by the use of potassium cyanide solution.—*Am. Druggist*, 1911, v. 58, p. 11.

An unsigned note (*J. Am. M. Assoc.* 1911, v. 56, p. 1211) on Eighteenth Century materia medica quotes some of the therapy of Herman Boerhaave with reference to silver.

An editorial (*Critic and Guide*, 1911, v. 14, p. 187) states that silver nitrate, in doses of one-fifth of a grain, dissolved in peppermint water, is a very valuable agent in the treatment of chronic catarrhal gastritis. It should be given on an empty stomach three times a day.

An editorial (*Therap. Gaz.* 1911, v. 35, pp. 341-343) discusses the use of silver nitrate in cases of discharge from the ears.

Herzog and Betzel report some observations on the disinfectant properties of silver nitrate.—*Ztschr. physiol. Chem.* 1911, v. 74, pp. 225-226.

Clark and Wylie discuss the comparative value of some urethral and other germicides, with a tabulated statement of the number of colonies in one loopful of test solution after twenty-four hours' incubation.—*J. Am. M. Assoc.* 1911, v. 57, p. 394.

Heeve, William L., gives silver nitrate in chronic diarrhoea with intense tormina with tenesmus; evacuations tinged with blood or mixed with a pinkish fluid.—*Nat. Eclect. M. Assoc. Quart.* 1910-1911, v. 2, p. 121.

An editorial note (*Lancet*, 1911, v. 180, p. 459) calls attention to the recent statement by W. E. Dixon that experiments seem to show that none of the organic compounds of silver are superior to silver nitrate.

ARGENTI OXIDUM.

Schaefer, Theodore William, presents a provisional notice on the use of soluble silver oxide in medicine.—*Boston M. & S. J.* 1911, v. 165, p. 92.

ARGENTUM [COLLOIDAL SILVER].

Düsterbehn, F., points out that the Ph. Germ. V describes colloidal silver as occurring as greenish or bluish-black, metallic, lustrous scales that form with water a colloidal solution. The degree of solubility is not indicated.—*Apoth.-Ztg.* 1911, v. 26, p. 145.

Schneider, A., calls attention to the Ph. Germ. V requirements for colloidal silver.—*Pharm. Zentralh.* 1911, v. 52, p. 539.

Linke, H., notes that the Ph. Germ. V does not require the determination of the silver content for the new official colloidal silver preparation, and that the absence of this requirement may lead to the introduction of inferior grades of this preparation.

An unsigned article (*Am. Druggist*, 1911, v. 58, p. 138) points out that the unguentum argenti colloidalis of the Ph. Germ. V contains colloidal silver, 15; water, 5; benzoinated lard, 73; and yellow wax, 7.

Hatschek states that colloids are of increasing use in pharmacy where metallo-organic solutions are required. If silver is used as nitrate, the effect of the NO_3 ion is produced as well as the Ag ion, in many cases undesirable, but by using colloidal silver solution this is obviated.—Chem. & Drug. 1911, v. 79, p. 575.

ARGENTUM [SILVER PROTEINATE].

An editorial (Pharm. Ztg. 1911, v. 56, p. 572) points out that the Ph. Germ. V includes protargol as a synonym for argentum proteinicum.

Düsterbehn, F., notes that the Ph. Germ. V describes silver proteinate as a fine brownish yellow powder, readily soluble in water in which the silver occurs in a masked form that does not react with the ordinary reagents for silver.—Apoth.-Ztg. 1911, v. 26, p. 145. See also Pharm. J. 1911, v. 86, p. 497.

Schneider, A., discusses the Ph. Germ. V requirements for silver proteinate.—Pharm. Zentralh. 1911, v. 52, p. 540.

Linke, H., points out that the Ph. Germ. V requirement for 8 per cent of metallic silver is usually exceeded by the commercially available preparations. One sample examined by him according to the Ph. Germ. V method gave 8.416 per cent silver.—Ber. pharm. Gesellsch. 1911, v. 21, p. 183.

Wijnne, A. J., reports examining 4 samples of silver proteinate which were found to contain from 9.55 to 16.9 per cent of ash, the limit of the Ph. Ndl. IV Supplement being from 8 to 12 per cent. The silver content of the water free material varied from 8.4 to 9.15 and the silver content of the ash varied from 49.1 to 87.9 per cent.—Pharm. Weekblad, 1911, v. 48, p. 133.

Whorton, C., asserts that just a few drops of glycerin throw protargol into immediate solution, and slightly warmed water dissolves argyrol almost instantly.—Proc. Alabama Pharm. Assoc. 1911, p. 97.

An editorial (Lancet, 1911, v. 181, p. 1570) calls attention to Samuel Theobald's protest against the indiscriminate use of the organic compounds of silver in ophthalmic practice.

ARNICA.

Lloyd, John Uri, states that all parts of the arnica plant were popular remedies in Germany at a very early period.—Bull. Lloyd Libr. 1911, No. 18, p. 6.

Hartwich, C., points out that the microscopical description of arnica has been materially enlarged upon in the Ph. Germ. V.—Apoth.-Ztg. 1911, v. 26, p. 7.

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Miller, Adolph W., reports that the price of arnica flowers has been materially advanced, on account of the partial failure of the crop.—Proc. N. W. D. A. 1911, p. 88.

"D. B." reports that, according to W. Mitlacher, the Austrian inspection of pharmacies found that Aronicum, Doronicum, and other yellow flowers are employed to adulterate arnica.—Bull. sc. pharmacol. 1911, v. 18, Annexes, p. 9.

Lythgoe, Hermann C., reports that 10 out of 31 samples of tincture of arnica were found to be adulterated.—Rep. Massachusetts Bd. Health, 1911, p. 442.

An unsigned abstract (N. A. J. H.) states that arnica is a remedy for headache alternating with prolapsus recti.—J. Am. Inst. Homœop. 1911, v. 3, p. 162.

Fyfe, John W., states that arnica is a spinal stimulant of great and varied usefulness, and is therefore indicated in all conditions in which there is deficient spinal innervation.—Eclectic Med. Glean. 1911, v. 7, pp. 436–437.

Dewey, W. A., gives arnica 6th or 30th internally for the lingering effect of blows, concussions, falls, and accidents generally.—Hahne-mann. Month. 1911, v. 46, p. 631.

ARSENI IODIDUM.

Richter, Erw., discusses the chemistry of arsenic triiodide and its behavior with solvents.—Apoth.-Ztg. 1911, v. 26, pp. 729–730, 742–743.

French, J. M., states that arsenic and its salts are the great alteratives. The bromides, iodides, and sulphides are commonly employed.—J. Therap. & Diet. 1911, v. 5, p. 143.

ARSENI TRIOXIDUM.

An editorial (Oil, Paint, and Drug Reporter, 1911, v. 79, Jan. 9, p. 8) in discussing the causes for the decline in the price of arsenic, states that it is due to the marketing of arsenic by the smelting companies in the West, which were compelled to put in apparatus to condense the noxious fumes given off in treating ores containing arsenic and sulphur. See also Meyer Bros. Drug. 1911, v. 32, p. 66.

An unsigned abstract (U. S. Consular Reports) gives a brief account of the production of white arsenic in Spain.—Pract. Drug. 1911, v. 29, May, p. 25.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 13) states that the formula As_2O_3 is proposed for the Ph. Brit., while the Ph. Germ. V gives the formula As_2O_5 .

Bohrisch and Kürschner discuss the quantitative estimation of arsenic in organic substances, with particular consideration of the determination of arsenic in organic combinations like salvarsan.—Pharm. Zentralh. 1911, v. 52, pp. 1365–1371, 1397–1400.

Bernegau, L. H., reports that of 11 samples of arsenic trioxide examined, 6 tested above the required 99.8 per cent As_2O_3 , while 5 tested slightly below, ranging, however, from 99.22 to 99.67 per cent.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 119.

Salkowski, E., comments on the new method for the ready determination of arsenic and certain metallic salts in solution by C. E. Carlson, and expresses the belief that the method is not so simple as is the determination of arsenic by means of a modified Marsh apparatus.—*Ztschr. physiol. Chem.* 1910-11, v. 70, pp. 186-188.

Taylor and Trubshaw report six cases of arsenical poisoning caused by fumes from a coke stove.—*Brit. M. J.* 1911, v. 2, p. 1591.

Salmon, D. E., presents an exhaustive paper on arsenical poisoning from smelter smoke in Deer Lodge Valley, Montana.—*Am. Vet. Rev.* 1911, v. 39, pp. 14-22, 245-260, 517-556.

The Scotch Correspondent (*Brit. M. J.* 1911, v. 1, p. 1208) discusses the recent outbreak of arsenic poisoning in Arran.

Sheridan, John J., presents a summary of the history of poisonings by arsenic.—*Am. Med.* 1911, v. 17, pp. 381-384.

Thomann comments on several recent articles on the habituation to arsenic, and notes that this habituation will no doubt play an important part in the effect of drugs like salvarsan.—*Schweiz. Wehnschr. Chem. u. Pharm.* 1911, v. 49, pp. 537-538.

Kionka, H., reports an experimental study of the action of arsenic and of arsenic compounds.—*Arch. internat. pharmacod. et therap.* 1911, v. 21, pp. 489-512.

Onaka, Morizo, reports observations on the action of arsenic on the red blood corpuscles.—*Ztschr. physiol. Chem.* 1910-11, v. 70, pp. 433-440.

Pond, L. R., contributes a short study on arsenic with special reference to its dental applications.—*Dental Digest*, 1911, v. 17, p. 687.

Fellman, Charles E., discusses the use of arsenic in dentistry.—*Ibid.* pp. 251-254, 381-384.

An unsigned note (*J. Am. M. Assoc.* 1911, v. 56, p. 1211) on Eighteenth Century materia medica quotes some of the therapy of Herman Boerhaave with reference to arsenic.

Zwetkoff, Anna, presents a contribution to our knowledge on the action of iron and of arsenic in chlorosis.—*Ztschr. exper. Path. u. Therap.* 1911, v. 9, pp. 393-416.

Neisser, A., in discussing the therapy of syphilis, reports that arsenic trioxide does not give results that are comparable with the results obtained by the use of organic preparations of arsenic.—*Arb. k. Gsundtsamte*, 1911, v. 37, p. 257.

Shadwick, G. W., states that the arsenicum patient is met every day. Nervous temperaments, sad and irritable disposition, with

cachectic and debilitated tendencies.—J. Therap. & Diet. 1911, v. 5, p. 365.

Dixon, W. E., asserts that the organic preparations of arsenic, unlike the iron compounds, are readily absorbed. So long as the arsenic forms an integral part of the molecule they are nonpoisonous, so far as arsenical action is concerned.—Pharm. J. 1911, v. 87, p. 16.

An editorial (Am. Med. 1911, v. 17, p. 64) states that the dangers of the new preparations of arsenic are coming in for more or less severe handling. It is now found that when injected in large doses they have been followed by optic atrophy.

Additional references on the chemistry, pharmacology, and therapeutic uses of trioxide will be found in Index Med.; J. Am. M. Assoc.; Chem. Abstr.; Zentralbl. Biochem. u. Biophysik; and Chem. Centralbl.

ARSENIC [NONOFFICIAL COMPOUNDS].

Fränkel, Sigmund, discusses the chemistry of masked metallic combinations, particularly the modern arsenic preparations.—Pharm. Post. 1911, v. 44, pp. 437-439.

Rupp and Lehmann describe a simple method for the estimation of arsenic in atoxyl and in arsacetin.—Apoth.-Ztg. 1911, v. 26, p. 203.

An editorial (Pharm. Ztg. 1911, v. 56, p. 572) points out that the Ph. Germ. V includes arsacetin as a synonym for natrium acetyl-arsanilicum.

An unsigned review (Chem. & Drug. 1911, v. 78, p. 47) gives the Ph. Germ. V requirements for arsacetin. See also Pharm. J. 1911, v. 86, p. 581.

Boyd, Francis D., presents a contribution to the study of protein metabolism under atoxyl, and concludes that the substance has a definite retarding influence on protein metabolism so that the patient may be expected to gain in weight.—Arch. internat. pharmacod. et therap. 1911, v. 21, pp. 281-285.

Bongrand, J. Charles, discusses the elimination of arsenic after treatment by organic arsenic compounds.—Bull. sc. pharmacol. 1911, v. 18, pp. 152-157.

Neisser, A., in discussing the therapy of syphilis, reports the opinion that the organic preparations of arsenic have a direct toxic action on the spirochæte.—Arb. k. Gsundtsamte, 1911, v. 37, p. 258.

An editorial (Brit. M. J. 1911, v. 2, p. 391) calls attention to the report by Schirmer of a recent case of optic atrophy following the use of arsacetin, and refers to others.

Merck, E. (Ann. Rep. 1911, v. 25, p. 164), comments on some of the recent literature on atoxyl.

Riedel's Berichte (1911, p. 51) states that the treatment of syphilis with atoxyl has not proven satisfactory and that, even in the treatment of other diseases due to spirochætes or trypanosomes, the

unfortunate influence of the medicament on the optic nerve is destined to discourage its use.

Salvarsan is the name under which arsenphenol-amin hydrochloride, arsenobenzol or "606" is being marketed in this country. A number of papers on the chemical and pharmaceutical properties of this substance have appeared in the current journals and the information necessary for preparing the material for injection is available from the literature accompanying the package.

Puckner and Hilpert point out that salvarsan is an arsenic compound containing that metal in a low state of oxidation, and the product is, therefore, a powerful reducing agent, and is decomposed by bodies which are oxidizers, including air. Being a weak base, its hydrochloride, when dissolved in water, is largely decomposed by the latter (hydrolysed), and hence gives a solution having an acid reaction. A solution of salvarsan is therefore acid, and will remain so until for every molecule of salvarsan there have been added two molecules of sodium hydroxide or a similar monovalent base.—*J. Am. M. Assoc.* 1911, v. 50, p. 2314.

Jörss, W., outlines the history of the discovery of salvarsan.—*Pharm. Zentralh.* 1911, v. 52, pp. 1079–1087.

Stewart, F. E., discusses salvarsan as a patented product.—*J. Am. M. Assoc.* 1911, v. 56, p. 1676.

An editorial (*Am. Druggist*, 1911, v. 58, p. 205) calls attention to the fraudulent exploitation of salvarsan by numerous fake medical institutes throughout the country.

Gaebel, G. Otto, discusses the quantitative composition of salvarsan.—*Apoth.-Ztg.* 1911, v. 26, pp. 215–216.

"E. Hg." discusses the practical handling of salvarsan, the making of alkaline solutions, neutral aqueous solutions, and of mixtures with oil. The latter he points out are comparatively stable and may be kept on hand for several days.—*Pharm. Ztg.* 1911, v. 56, pp. 208–209.

Beringer, George M., jr., discusses the preparation of a neutral suspension of salvarsan.—*Proc. New Jersey Pharm. Assoc.* 1911, pp. 91–93.

An unsigned article (*Apoth.-Ztg.* 1911, v. 26, 931) calls attention to the necessary precaution, emphasized by Ehrlich, that freshly distilled water be used in making solutions of salvarsan.

Swift and Ellis assert that the preparation of salvarsan with freshly distilled and sterilized water practically eliminates all unfavorable toxic symptoms.—*J. Am. M. Assoc.* 1911, v. 57, p. 2051.

Hagen, Hans, calls attention to some of the precautions to be observed in making solutions of salvarsan.—*Pharm. Ztg.* 1911, v. 56, p. 45.

Turner, Joseph L., discusses chemotherapy and "606"; the principles followed by Ehrlich in his studies of experimental therapy;

the relation of organotherapy to parasitotropy and steps in the study of the arsenic compounds.—*Am. Druggist*, 1911, v. 58, pp. 5–8. See also pp. 27, 55, and *Bull. Am. Pharm. Assoc.* 1911, v. 6, pp. 58–66, 66–70.

Zwick, A. O., tells something about “606” and the principles which lead to its discovery.—*Midl. Drug.* 1911, v. 45, pp. 330–334, 382–387, 433–438, and 480–484.

Loxton, Arthur, recommends the administration of salvarsan in almond oil.—*Brit. M. J.* 1911, v. 2, p. 214.

Gaebel, G. Otto, discusses the possible complication of salvarsan in the forensic detection of arsenic.—*Arch. Pharm.* 1911, v. 249, pp. 49–56.

Richter, R., discusses the toxicological detection of arsenic in the form of salvarsan.—*Pharm. Ztg.* 1911, v. 56, pp. 314–315.

An editorial (*Am. Druggist*, 1911, v. 58, p. 3) calls attention to the danger of exposing salvarsan to the action of the atmosphere, and urges that the printed instructions that accompany each ampoule should be carefully followed, as they have been determined by thoroughly competent men after many thousands of applications.

Hirschfelder, J. O., discusses the administration and the physiological action of salvarsan.—*Tr. Am. M. Assoc. Sec. Pharm. & Therap.* 1911, pp. 302–315. Also *J. Am. M. Assoc.* 1911, v. 57, pp. 1667–1670.

Pusey, William Allen, in discussing the salvarsan situation, asserts that indications are very strong that we are on the verge of a period of indiscriminate and reckless use of this remedy that will result in disappointment and damage to many patients. He further points out that this drug does not absolutely cure syphilis, and that in the hands of careless or incompetent practitioners it is likely to do much harm.—*J. Am. Med. Assoc.* 1911, v. 51, pp. 118–120.

Muto and Sanno report observations on the elimination of arsenic after intra-muscular injection of salvarsan.—*Therap. Monatsh.* 1911, v. 25, pp. 599–601.

Gottheil, W. S., thinks that while salvarsan is an additional weapon in our armamentarium, it does not accomplish the marvels attributed to it. It does not cure any more than does mercury, and it is as useless as mercury in late cases.—*J. Am. M. Assoc.* 1911, v. 56, p. 1353.

McKenna, C. Hugh, thinks the medical profession should use every effort to eradicate the idea that a single dose of salvarsan will permanently cure syphilis. He thinks it should always be followed by mercury or the iodides or both, and gives several other warnings.—*J. Am. M. Assoc.* 1911, v. 56, pp. 801–803.

Fox, Howard, discusses the action of salvarsan upon the Wassermann reaction, and finds it difficult to draw a general conclusion owing to the great discrepancies in the results of various observers.—*Boston M. & S. J.* 1911, v. 164, pp. 776–778.

Wise, Fred, discusses the dangers and contraindications of salvarsan.—N. York M. J. 1911, v. 93, pp. 820-822.

Marshall, C. F., believes that mercury can not be replaced by arsenobenzol in the treatment of syphilis, at any rate in the present state of our knowledge.—Lancet, 1911, v. 180, p. 501. Also Brit. M. J. 1911, v. 1, pp. 226, 332, 401; and N. York M. J. 1911, v. 94, pp. 137-139.

McIntosh and Fildes reply to a paper by C. F. Marshall on "606" and syphilis.—Lancet 1911, v. 180, p. 724. See also Marshall, *ibid.* p. 837.

Towle and others contribute to a symposium on salvarsan from the clinical standpoint.—Bost. M. & S. J. 1911, v. 165, pp. 505-519.

Schamberg and Ginsburg present twelve "Dont's" in the use of salvarsan.—J. Am. M. Assoc. 1911, v. 56, p. 347.

An editorial (Hahnemann. Month. 1911, v. 46, pp. 309-311) in commenting on some clinical results from the use of salvarsan in the treatment of syphilis, states that salvarsan is undoubtedly an effective remedy in causing manifestations of syphilis to disappear, but it will probably not replace the use of mercury in the treatment of syphilis except in certain selected cases.

Kuznitzky, Erich, reports observations on the action of dioxymido arsenobenzol. He concludes that this remedy is curative in that it removes spirochaetes clinically as well as pathologically.—Arb. k. Gsndhtsamte, 1911, v. 37, pp. 295-303.

Manuel and Bayly present a review of treatment by "606" or salvarsan.—Practitioner, 1911, v. 86, pp. 772-779.

A number of book reviews call attention to upward of 15 monographs and separates on the use of salvarsan.—Therap. Monatsh. 1911, v. 25, pp. 118-120.

Merck, E. (Ann. Rep. 1911, v. 25, pp. 379-388) reviews the literature of salvarsan, with a bibliographic list, classified under the diseases and conditions in which it has been used and reported upon.

Riedel's Berichte (1911, pp. 108-112) reviews some of the contributions on salvarsan which appeared during the year 1910.

For additional references see Index Med.; J. Am. M. Assoc.; Therap. Monatsh.; and Zentralbl. Biochem. u. Biophysik.

See also under Sodium Cacodylate.

ASAFOETIDA.

Lloyd, John Uri, points out that, under the name "Laser," a substance supposed to have been asafetida has from all time been used in India and Persia, and thence long exported.—Bull. Lloyd Libr. 1911, No. 18, p. 6.

Beringer, George M., points out that the Ph. Germ. V requires that asafetida should be at least 50 per cent soluble in boiling alcohol and leave not over 15 per cent of ash.—*Am. J. Pharm.* 1911, v. 83, p. 330; and *Proc. New Jersey Pharm. Assoc.* 1911, p. 78. See also *Pharm. J.* 1911, v. 86, p. 653, and *Chem. & Drug.* 1911, v. 78, p. 351.

Gehe & Co. (*Handelsbericht*, 1911, p. 55) state that the quality of the available asafetida is far from satisfactory. The drug in the form of tears is absent entirely, and even the better grades of solid material were extremely scarce.

Warth, Albin H., discusses the asafetida situation and expresses the belief that it is clearly up to the Revision Committee to drop "Asafetida" from the Pharmacopœia, and substitute "Purified Asafetida" therefor.—*Drug Topics*, 1911, v. 26, pp. 296-297.

Lilly, J. K., reports that asafetida has continued to cause difficulty, owing to the infrequency with which gum containing 50 per cent alcohol soluble resin can be obtained.—*Proc. N. W. D. A.* 1911, p. 161.

Rusby, H. H., asserts that asafetida frequently contains from 30 to 50 per cent of chopped stones.—*Proc. Vermont Pharm. Assoc.* 1911, p. 83. See also *Pharm. Era*, 1911, v. 44, p. 140; and *Oil, Paint, and Drug Reporter*, 1911, v. 80, November 20, p. 28K.

Warth, Albin H., discusses the asafetida situation with particular reference to the merits of adulterated asafetida, and the pharmacopœial standards.—*Pract. Drug.* 1911, v. 29, September, p. 42.

Wiley, H. W., reports that many importations of asafetida have been permitted entry in harmony with Treasury Decision 31097, which provides that under certain conditions asafetida may be allowed entry in case the product contains 35 per cent or more of alcohol soluble material.—*Ann. Rep. U. S. Dept. Agric.* 1911, 1912, pp. 424, 431.

Miller, Adolph W., reports that it is still difficult to obtain either lump or powdered gum which will comply strictly with the tests of the U. S. P. He hopes that in the present revision of our text book the standard will be lowered to a point which can be more readily complied with.—*Proc. N. W. D. A.* 1911, p. 89.

Rusby, H. H., points out that the drying of asafetida for the purpose of powdering the same greatly injures its quality.—*Proc. New York Pharm. Assoc.* 1911, p. 154.

He thinks it manifestly necessary that in pulverizing asafetida the diluent should be very carefully selected in order that no undesirable results supervene.—*Pharm. Era*, 1911, v. 44, p. 141.

Sechler and Becker present a note on the detection of gum ammoniacum and gum galbanum in asafetida.—*Ibid.* p. 543.

Pearson, W. A., reports that it is difficult to get samples of asafetida containing less than 15 per cent of ash. Many of the better sam-

ples contain from 20 to 30 per cent.—Proc. Pennsylvania Pharm Assoc. 1911, p. 119. See also Bull. Am. Pharm. Assoc. 1911, v. 6, p. 343.

Dohme and Engelhardt point out that, owing to the scarcity of asafetida, it would be advisable to decrease the percentage of alcohol-soluble matter and to increase the allowable percentage of ash.—Am. J. Pharm. 1911, v. 83, p. 520.

An editorial (Chem. & Drug. 1911, v. 78, p. 18) comments on the admission into the United States of asafetida containing 35 per cent or more of alcohol soluble material, and points out that there is a legitimate demand for asafetida apart from medicinal purposes.

Parry, Ernest J., has not found the high acid values reported by Umney. Six samples examined gave: Acid value, 59 to 70; ester value, 142 to 200. He urges wider examination, that useful standards for the tincture may be determined.—Chem. & Drug. 1911, v. 78, p. 378.

Tunmann, O., presents several illustrations showing microphotographs of ferulic acid, obtained from asafetida by microsublimation. He also shows a number of type crystals of ferulic acid.—Gehe & Co. Handelsbericht, 1911, pp. 155–162.

Table showing some of the analytical results reported for asafetida.

Reporters.	Number of samples—		References.
	Examined.	Not U. S. P.	
Schneider, Albert.....	2	2	Pacific Pharm. 1911, v. 5, p. 178.
Bernegau, L. H.....	28	22	Proc. Pennsylvania Pharm. Assoc. 1911, p. 119.
Boberg, Otto J. S.....	10	10	Proc. Wisconsin Pharm. Assoc. 1911, pp. 29–30.
Brown, L. A.....	1	1	Bull. Kentucky Agric. Exper. Sta. 1911, October pp. 25–33.
Ferguson, George A.....	23	23	Proc. New York Pharm. Assoc. 1911, p. 151.
Francis, J. R.....	17	17	Proc. Pennsylvania Pharm. Assoc. 1911, p. 119.
Howard, Charles D.....	5	5	New Hampshire San. Bull. 1911, v. 3, No. 13 p. 255.
Smith, Kline & French Co....	36	32	Analytical Report, 1911, p. 12.
Do.....	7	7	<i>Ibid.</i>
Evans Sons Lescher & Webb..	2	2	Analytical Notes, 1911, 1912, p. 11.

Notice of Judgment No. 854, under the food and drugs act, deals with the adulteration and misbranding of asafetida.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 7) report that they have never met with the Ph. Brit. minimum of 65 per cent matter soluble in 90 per cent alcohol. The highest figure obtained during the year was from a sample with but 4.03 per cent of ash, and which yielded 51.20 per cent soluble in 90 per cent alcohol.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, states that asafetida is one of the most frequently adulterated drugs.

The variety in tears is rare and that in mass contains generally a considerable quantity of stones.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 227, and J. Pharm. Anvers, 1911, v. 67, p. 516.

Pearson, W. A., expresses the belief that a definite standard for the amount of soluble material in tincture of asafetida should be insisted on.—Am. J. Pharm. 1911, v. 83, p. 77.

The Biennial Report of the Inspectors of Pharmacies, 1909-1910, states that tincture of asafetida is frequently much too poor in extract.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 240, and J. Pharm. Anvers, 1911, v. 67, p. 564.

Weinstein, Joseph, reports on 6 samples of emulsion of asafetida, two appeared to consist of water with just sufficient asafetida to make a milky mixture.—Proc. New York Pharm. Assoc. 1911, p. 151.

Moffat, John L., states that asafetida is indicated in orbital neuralgia; better, pressure and rest.—Hahnemann. Month. 1911, v. 46, p. 298.

ASPIDIUM.

Lloyd, John Uri, states that the root of aspidium was used by the ancients as a vermifuge, and was described by Theophrastus, Dioscorides, and Pliny.—Bull. Lloyd Libr. 1911, No. 18, p. 6.

Rosendahl, H., discusses the anthelmintic value of various fern rhizomes, and suggests that *Dryopteris dilatata* replace, in the various pharmacopœias, *Aspidium filix-mas*, as it is at least four times as active against *Bothryocephalus latus*.—Svensk farm. Tidskr. 1911, v. 15, pp. 85-89.

Pretz, Harold W., reports that *Dryopteris marginalis* (L.) A. Gray, with several related species, occurs generally throughout Lehigh County, Pennsylvania, on all soils and formations and in many situations.—Bull. Torrey Bot. Club, 1911, v. 38, p. 66.

Rusby, H. H., knows of no evidence that would lead to the inclusion of *D. marginalis*. He points out that large quantities of osmunda rhizomes are ground and sold for aspidium.—Pharm. Era, 1911, v. 44, p. 94.

Plaut, Albert, states that though the U. S. P. requires that the pharmacist use unpeeled aspidium, none such is to be found on the market.—*Ibid.* p. 12.

Rosenthaler, L., points out that the Ph. Germ. V requires that aspidium and powdered aspidium be kept over freshly calcined lime. The drug is to be renewed annually.—Pharm. Zentralh. 1911, v. 52, p. 31.

Hartwich, C., objects to the Ph. Germ. V statement that aspidium has only a faint odor. He also calls attention to several inconsistencies in the description of the microscopic appearance of the drug.—Apoth.-Ztg. 1911, v. 26, p. 85. See also Chem. & Drug. 1911, v. 78, p. 632.

Dohme and Engelhardt assert that the activity of aspidium depends entirely on those substances present in what is generally termed "crude filicin." They think that an assay should be included.—*Am. J. Pharm.* 1911, v. 83, p. 520.

Caesar & Loretz (*Jahres-Bericht*, 1911, pp. 125–126) outline a method for determining the extract content of male fern.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, states that male fern is but little employed in substance and is generally old and of a reddish-brown color.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 230. Also *J. Pharm. Anvers*, 1911, v. 67, p. 518.

Pearson, W. A., reports that 2 lots of oleoresin of aspidium were rejected because they were not green.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 126, and *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 346.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 48) report on 5 samples of oleoresin of male fern, 2 of which were heavily adulterated with castor oil (55 to 70 per cent). They present a table giving the refractive index, iodine value, and filicic acid content of the several preparations examined.

Parry, Ernest J., presents a note on extract of male fern and gives tabulated results of his examination from a number of samples. Of 20 samples examined, all, with one exception, were adulterated.—*Pharm. J.* 1911, v. 87, p. 778.

Southall Bros. & Barclay (*Rep.* 1911, Birmingham, 1912, p. 15) confirm the statement that much of the commercial extract of male fern is grossly adulterated.

An editorial (*Chem. & Drug.* 1911, v. 79, p. 749) commenting on Parry's observation, that extract of male fern is very commonly adulterated with castor oil, notes the tests of the *Ph. Ndl.* and the *Ph. Helv.* See also p. 798.

Luftensteiner, Hans, in a contribution on anthelmintics, discusses the nature and constituents of aspidium and the chemistry of filicic acid and related products.—*Pharm. Prax.* 1911, v. 10, pp. 132–139.

Jaquet, A., discusses the treatment of tapeworm by means of preparations of aspidium.—*Pharm. Ztg.* 1911, v. 56, p. 984.

An editorial (*Lancet*, 1911, v. 180, p. 1094) calls attention to a curious and apparently unique case of poisoning by extract of male fern, reported by A. Magnus-Levy (*Berl. klin. Wchschr.*, March 27).

Lascoff, J. Leon, calls renewed attention to the danger of dispensing aspidium or any of its preparations with a fatty oil.—*Drug. Circ.* 1911, v. 55, p. 89. Also *Pharm. Era*, 1911, v. 44, p. 21.

Schultz, W. H., reports some observations on the use of male fern as a remedy in the treatment of hookworm disease. He points out that it is essential not only to have a fresh ether extract, but to prepare the alimentary tract for its reception.—*Tr. Am. M. Assoc. Sec. Pharm. & Therap.* 1911, pp. 53–56. Also *J. Am. M. Assoc.* 1911, v. 57, pp. 1102–1106.

Merck, E. (Ann. Rep. 1911, v. 25, pp. 299-301) presents some interesting abstracts on the toxicology and methods of administration of male fern. See also Index Med., J. Am. M. Assoc., and Zentralbl. Biochem. u. Biophysik.

ASPIDOSPERMINE.

Craig, Hugh, reports the opinion that it would be better to make quebracho bark official.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 607.

A news note (Oil, Paint, and Drug Reporter, 1911, v. 79, Jan. 16, p. 41) calls attention to some reasons for the increasing neglect of the quebracho industry in Paraguay.

Rusby, H. H., suggests that the practice of removing from quebracho bark the valuable inner portion, and then selling it as genuine, be provided against.—Pharm. Era, 1911, v. 44, p. 140.

Hinsdale, A. E., states that aspidospermine hardly ever fails to relieve asthmatic cases. It is not only palliative, but seems to exert a curative action in some cases. The remedy has been referred to as the "Digitalis of the lungs," and should be given in doses of 1 grain, three times a day.—Hahnemann. Month. 1911, v. 46, p. 154.

ATROPINA.

Lloyd, Gordon, states that atropine was first extracted from belladonna in 1831, by Meins.—Rocky Mountain Druggist, 1911, v. 25, March, p. 43.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 12) report on a sample of atropine which melted at 1.16° and softened at 112.5°. They point out that this alkaloid is soluble to the extent of 1 per cent in warm soft paraffin, but on cooling is practically insoluble without the use of oleic acid.

Cloetta, M., reports experiments to determine the habituation of the animal organism to atropine.—Arch. exper. Path. u. Pharmacol. 1910-11, v. 64, pp. 427-438.

Tyrode, Maurice Vejux, calls attention to recent contributions on the use of atropine in gastric diseases.—Boston M. & S. J. 1911, v. 164, p. 685.

An editorial note (Critic and Guide, 1911, v. 14, p. 347-348) states that in the treatment of intestinal obstruction atropine sometimes acts successfully.

Fleckseder, Rudolf, reports some observations on the influence of atropine and of opium on calomel diuresis.—Arch. exper. Path. u. pharmacol. 1911, v. 67, pp. 420-421.

Ewing, E. M., reports some observations on the effects of pilocarpine and atropine upon the amylolytic power and composition of the saliva, and points out that atropine diminishes the amylolytic power of the saliva from 15 to 30 per cent.

Van Zwaluwenburg, James G., reports a case of partial heart block apparently cured by the use of atropine, and two cases in which such

injection produced no notable effect on the block.—Arch. Int. Med. 1911, v. 8, pp. 141-149.

For additional references see Index Med., J. Am. M. Assoc.; Zentralbl. Biochem. u. Physik.

ATROPINÆ SULPHAS.

Düsterbehn, F., notes that the Ph. Germ. V now describes atropine sulphate as a white crystalline powder and no longer requires the determination of a melting point.—Apoth.-Ztg. 1911, v. 26, p. 146. See also Pharm. J. 1911, v. 86, p. 581.

Poulenc, Camille, reports a suggested correction in the Codex statement of the composition of atropine sulphate.—J. Pharm. et Chim. 1911, v. 4, p. 435.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 12) point out that the variable figures reported for the melting point of atropine sulphate are probably accounted for by differences in the amount of water present. One sample, having a titration value of 96.5 per cent, lost 2.2 per cent of water at 110°. The melting point, when dry, was 186.5°, when moist, 181°.

Vigouroux, H., cures acute blenorragia in a few days with atropine sulphate.—Cron. med. mex. 1911, v. 15, pp. 73-76.

AURANTII AMARI CORTEX.

Lloyd, John Uri, states that the orange was unknown to the ancient Greeks and Romans and was probably introduced into Europe by the Arabians.—Bull. Lloyd Libr. 1911, No. 18, p. 7.

Rosenthaler, L., describes and illustrates the nature of the material obtained from orange peel by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, p. 532.

BALSAMUM PERUVIANUM.

Lloyd, John Uri, states that balsam of Peru came to the attention of the earlier Spanish explorers in South America as a substance commonly employed by the natives as a remedy for wounds.—Bull. Lloyd Libr. 1911, No. 18, p. 7.

Hale, Albert (Pan-American Bulletin, May), asserts that the Republic of Salvador exports yearly 130,000 pounds of balsam of Peru, half of which goes to Germany, nearly as much to the United States, with the small remainder to France.—Cons. & Tr. Rep. June 24, 1911, p. 1338.

Schneider, A., states that the Ph. Germ. V now gives *Myroxylon balsamum* (Linné) Harms, var. *Pareiræ* (Rayle) Baillon as the origin of balsam of Peru. The sulphuric acid test has been omitted but a chloral hydrate test for fatty oils has been included.—Pharm. Zentralh. 1911, v. 52, p. 566.

Schimmel & Co. (Semi-Annual Report, October, 1911, p. 114) report that the Ph. Germ. V test for the presence of fatty oils in Peru

balsam is not always conclusive and point out that absolutely dry chloral hydrate should be employed in making the solution.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 653) notes that the specific gravity is given as 1.145 to 1.158 instead of 1.140 to 1.150.

Miller, Adolph W., reports that artificial balsam of Peru, made in Germany, is being sold at comparatively low prices and seems to comply with the requirements of the U. S. P.—Proc. N. W. D. A. 1911, p. 84. See also p. 161.

Rusby, H. H., states that the difficulty in connection with balsam of Peru is the marketing of a purely factitious product, and expresses the belief that its physical and chemical properties render the use of this factitious product as a substitute for balsam of Peru distinctly injurious and dangerous.—Oil, Paint, and Drug Reporter, 1911, v. 80, November 20, p. 28K.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 87–88) discuss the testing of balsam of Peru and present a table showing the specific gravity requirements included in the several pharmacopœias. See also pp. 13–15.

Riedel's Berichte (1911, pp. 18–19) states that the adulteration of balsam of Peru is difficult to detect satisfactorily. A sample of the drug imported direct had a specific gravity of 1.156 at 15°, acid number of 81.4, saponification number of 243.5, a cinnamein content of 60.4 per cent, and contained 2.6 per cent of matter insoluble in ether.

Stutterheim, G. A., discusses the quantitative estimation of cinnamein in balsam of Peru.—Pharm. Weekblad, 1911, v. 48, pp. 481–482. See also van Os, D., pp. 905–907.

Stöcker, in commenting on a sample of adulterated balsam of Peru, points out that genuine balsam of Peru does not always give a transparent solution with chloral hydrate.—Apoth.-Ztg. 1911, v. 26, p. 283.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 138) quote Kronstein, who traces the generation of Peru balsam to the polymerization of allyl cinnamate. They point out that it would be possible to determine the therapeutic value of a given Peru balsam by its allyl cinnamate content, and that an old balsam in which the ester has become quite polymerized may be inactive.

Smith, Kline & French Co. (Analytical Report, 1911, p. 13) reports that of 7 samples of balsam of Peru examined, only 1 sample conformed strictly to the U. S. P. requirements.

Parry, Ernest J., states that 5 samples of balsam of Peru gave acid value 69 to 81; ester value 164 to 192.—Chem. & Drug. 1911, v. 78, p. 378.

Wijnne, A. J., reports 3 samples of balsam of Peru, the cinnamein content of which was found to vary from 56.65 to 61 per cent.—Pharm. Weekblad, 1911, v. 48, p. 135.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 56) report that the specific gravity of pure balsam of Peru has been observed to lie between 1.147 and 1.154. In some cases where there was a strong suspicion of synthetic, the characteristic color reaction could not be obtained.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 17) report that 4 samples of Peruvian balsam have been examined, with results for the most part satisfactory: specific gravity, 1.1468 to 1.1490; ether residue from 5 gm., 2.6 to 3.09 gm.; saponification value of ether residue, 240.4 to 253.1.

The Biennial Report of the Inspection of Pharmacies, 1909-1910, states that a number of samples do not withstand the nitric acid test for fictitious balsams.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 228. Also J. Pharm. Anvers, 1911, v. 67, p. 517.

Watson, J. D., presents a brief note on balsam of Peru emulsion.—Brit. & Col. Drug. 1911, v. 59, p. 48.

Soubeyran, M. (Bull. gén. Thérap. June 30, 1911) discusses the surgical applications of balsam of Peru.—Pharm. J. 1911, v. 87, p. 230.

BALSAMUM TOLUTANUM.

Lloyd, John Uri, states that South American and West Indian balsam of tolu was in use by the natives on the discovery of South America and the West Islands and is to-day collected after the native manner of the early days.—Bull. Lloyd Libr. 1911, No. 18, p. 8.

Schneider, A., points out that the Ph. Germ. V now gives *Myroxylon balsamum* (Linné) Harms, var. *genuinum* Baillon as the source of balsam of tolu.—Pharm. Zentralh. 1911, v. 52, p. 566.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 70) report on 7 samples of tolu balsam which were found to contain from 7.6 to 11.2 per cent of free acid and 22.4 to 32.1 per cent of combined acid.

Parry, Ernest J., states that five samples of balsam of tolu gave acid values of from 105 to 132, ester values 40 to 52.—Chem. & Drug. 1911, v. 78, p. 378.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 20) report that the 3 samples of balsam of tolu examined all proved to be of indifferent quality, containing much lower proportions of aromatic esters than those recorded last year.

The Biennial Report of the Inspection of Pharmacies, 1909-1910, states that certain of the balsams dissolve well in carbon disulphide, responding to the indices of acidity and saponification fixed by the pharmacopœia.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 228. Also J. Pharm. Anvers, 1911, v. 67, p. 517.

The Committee of Reference in Pharmacy (Third Report, p. 35) recommends that instead of boiling the balsam of tolu for half an

hour, in the making of the sirup, boiling water should be poured upon the balsam and digestion on a water bath continued for half an hour. See also Pharm. J. 1911, v. 87, p. 847.

An unsigned note (J. Am. M. Assoc. 1911, v. 56, p. 1211) on Eighteenth Century materia medica quotes some of the therapy of Herman Boerhaave with reference to balsam of tolu.

BELLADONNÆ FOLIA.

Lloyd, John Uri, states that the first authentic notice of belladonna appeared in Grand Herbar, a book published about 1504, although the term "solatrum furiale," used by Saladinus of Ascoli about 1450, is presumed to refer to it.—Bull. Lloyd Libr. 1911, No. 18, p. 8. Also Eclectic Med. Glean. 1911, v. 7, pp. 405–406.

Hartwich, C., in discussing the Ph. Germ. V, notes that he has been unable to corroborate the statement that the crystalline sand cells on the lower side of belladonna leaves appear as "raised white points," when viewed with the aid of an ordinary magnifying glass.—Apoth.-Ztg. 1911, v. 26, p. 13. See also Pharm. J. 1911, v. 86, pp. 205, 653.

The Committee of Reference in Pharmacy (Third Report, Suppl., p. 2) proposes, in addition to the fresh leaves and branches, that the dried leaves separated from the branches be introduced, and the latter required to contain not less than 0.3 nor more than 0.4 per cent alkaloids tested by the U. S. P. process. The description of the leaves is extended by a reference to the striated cuticle of the epidermis of both surfaces. See also Pharm. J. 1911, v. 87, p. 494.

Rusby, H. H., states that there is a general trend in favor of authorizing the substitution of the herb for the leaves. He expresses the belief that despite all statements to the contrary large stems are very deficient in alkaloidal percentage.—Oil, Paint, and Drug Reporter, 1911, v. 80, Nov. 20, p. 28K. See also Pharm. Era, 1911, v. 44, pp. 95, 140.

Danckwortt, P. W., reports that experiments show that the leaves of *Atropa belladonna* contain less alkaloid than the herb. The herb also contains more extractive than does the leaf.—Arch. Pharm. 1911, v. 249, p. 247.

Vreven and Schreiber discuss the influence of a fertilizing agent on the growth of belladonna and on the alkaloidal content.—Schweiz. Wehnschr. Chem. u. Pharm. 1911, v. 49, pp. 378–379; also Ann. pharm. Louvain, 1911, v. 17, pp. 97–102.

Burmman, James, in a discussion of the annual variation in the active principles in a number of medicinal plants, reports that during the past 4 years belladonna was found to vary from 0.045 per cent of atropine, in 1909, to 0.094 per cent, in 1907.—Schweiz. Wehnschr. Chem. u. Pharm. 1911, v. 49, p. 8.

True, R. H., expects that belladonna can be grown with any degree of uniformity to the standard required, the selection of the seed

undoubtedly being the key to the problem.—Proc. N. W. D. A. 1911, p. 173–174.

An editorial (Chem. & Drug. 1911, v. 78, p. 129) comments on belladonna culture in the U. S., with special reference to the experiments of Schneider and the assays of Havenhill and Vanderkleed.

Mitlacher, Wilhelm, reports on a sample of belladonna adulterated with the leaves of *Ailanthus glandulosa* Desf.—Ztschr. allg. österr. Apoth.-Ver. 1911, v. 49, p. 209.

Vanderkleed, Charles E., reports on a sample of belladonna adulterated with an unusually large amount of cut stems.—Merck's Rep. 1911, v. 20, p. 304. See also Meyer Bros. Drug. 1911, v. 32, p. 68; and Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 17–18.

Schneider, Albert, reports on 5 samples of belladonna leaves, 4 of which were adulterated.—Pacific Pharm. 1911, v. 5, p. 177.

Notices of Judgment, Nos. 754 and 871, under the food and drugs act, deal with the adulteration and misbranding of belladonna.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 110–112) discuss the valuation of belladonna leaves, and present a table showing the alkaloid requirement and the limitations for ash included in the several pharmacopœias.

Kimberly, C. H., reports the opinion that the general method for the assay of belladonna, stramonium, hyoscyamus, and scopolia could be improved by using 25 cc. more of the menstruum, as the total extraction of the alkaloid can not always be accomplished by using only 100 cc.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 160.

Dohme and Engelhardt point out that the proposed aliquot part method for belladonna has a decided advantage over the present process and gives very satisfactory results.—Am. J. Pharm. 1911, v. 83, p. 520.

Table showing reported variations in alkaloidal content of belladonna leaves.

Reporter.	Number of samples.	Per cent mydriatic alkaloids.		References.
		Minimum.	Maximum.	
Ames, W. S.....	3	0.143	0.2295	Proc. Missouri Pharm. Assoc. 1911, p. 98.
Ferguson, George.....	3	0.229	0.602	Proc. New York Pharm. Assoc. 1911, p. 153.
Noyes, C. E.....	6	0.309	0.36	Proc. Minnesota Pharm. Assoc. 1911, p. 75.
Smith, Kline & French Co...	5	0.238	0.43	Analytical Report, 1911, p. 13.
Students California Coll. Pharm.	10	0.338	0.668	Pacific Pharm. 1911, v. 5, p. 214.
Vanderkleed, Chas. E.....	24	0.190	0.525	Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.
Evans Some Leacher & Webb...	6	0.24	0.51	Analytical Notes, 1911, 1912, p. 13.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 8) report that a sample of German belladonna leaves of good quality yielded a powder containing 0.63 per cent of total alkaloid (by titration), and gave 14.19 per cent of ash.

Caesar & Loretz (Jahres-Bericht, 1911, p. 29) report that the extract content of air dry belladonna leaf was found to vary from 0.336 to 0.606 per cent. They also point out that care should be exercised in the purchase of this drug, as *scopola* leaf is frequently substituted for it.

Bartels and van der Wielen discuss the making of extract of belladonna and present tables showing the relation of the menstruum to the yield and the alkaloid content.—Pharm. Weekblad, 1941, v. 48, pp. 1018–1021.

Roderfeld, A., in a review of the Ph. Germ. V (Apoth.-Ztg. 1911, v. 26, p. 263) notes that in common with the majority of foreign pharmacopœias extract of belladonna is now directed to be made from the dried and coarsely powdered leaf. See also Chem. & Drug. 1911, v. 78, p. 631; and Am. Druggist, 1911, v. 58, p. 137.

An unsigned article (Pharm. Ztg. 1911, v. 56, p. 604) outlines a method for the estimation of the alkaloidal content of extract of belladonna and of extract of hyoscyamus.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 13) report that 11 samples of green leaf extract of belladonna varied in hyoscyamine content from 0.46 to 0.75 per cent. Two samples of alcoholic leaf extract contained 1.5 to 1.8 per cent hyoscyamine, respectively.

Dankwortt, P. W., reports the examination of 6 samples of extract of belladonna leaves and herb from fresh and dried plants. The several extracts contained from 14.07 to 21.54 per cent of water, from 12.08 to 19.27 per cent of ash, and from 1.114 to 2.227 per cent of alkaloids.—Arch. Pharm. 1911, v. 249, pp. 247–253.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, states that extract of belladonna was found of uncertain strength, either too rich or too poor in alkaloids.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 238. Also J. Pharm. Anvers, 1911, v. 67, p. 562.

Wild, R. B., asserts that the belladonna ointment is too strong and may cause unpleasant symptoms.—Pharm. J. 1911, v. 87, p. 133. See also Brit. M. J. 1911, v. 2, p. 162.

Dohme and Engelhardt find that the present U. S. P. process for the assay of belladonna plaster works very well.—Am. J. Pharm. 1911, v. 83, p. 521.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 14) point out that in general a belladonna plaster with a rubber basis estimates lower than that with the Ph. Brit. resinous base, even when made the same strength. They add that the U. S. P. method of assay yields even lower results than the methods used by them.

The A. Ph. A. Committee on Drug Market is reported as finding the range of extractive in 10 samples of tincture of belladonna to be from 1.05 to 3.76 per cent. The alcohol content ranged from 37.5 to 47.5 per cent.—*Drug Topics*, 1911, v. 26, p. 275.

Havenhill, L. D., reports that 13 samples of tincture of belladonna were examined, most of which were found to be somewhat below the U. S. P. standard of 0.035 gm. of mydriatic alkaloids in 100 cc.—*Proc. Kansas Pharm. Assoc.* 1911, p. 110.

Bachman, Gustav, reports that the sample of tincture of belladonna analyzed by him contained 0.0304 gm. of the alkaloids from belladonna.—*Proc. Minnesota Pharm. Assoc.* 1911, p. 102.

Sayre, L. E., reports on 7 samples of tincture of belladonna. Three were found to contain an insufficient amount of mydriatic alkaloid and were not passed.—*Bull. Kansas Bd. Health*, 1911, v. 7, pp. 6 ff.

Starr, M. A., reports two cases of belladonna poisoning which, without showing the usual symptoms, presented a state of mental excitement most unusual and interesting.—*Med. Rec.* 1911, v. 79, pp. 1050-1051.

Berner, Agnes, in a communication on the narcotic properties of the *Solanaceæ*, reports that the tincture of belladonna and the fluid extract of belladonna increase the narcotic action of morphine.—*Ztschr. exper. Path. u. Therap.* 1911, v. 9, pp. 571-580.

Lambert, Alexander, declares that his belladonna treatment of drug addiction which he has somewhat simplified is the most successful he has yet found for the obliteration of the craving for morphine, opium, cocaine, alcohol, or tobacco.—*J. Am. M. Assoc.* 1911, v. 56, p. 503.

Hunt, E. L., states that the use of belladonna in epilepsy dates from the Seventeenth Century. It was recommended by Mardorf, in 1891, and later was a favorite remedy of Trousseau. Since the advent of the bromides its use has become less general.—*Med. Rec.* 1911, v. 80, p. 321.

Mundy, W. N., states that the indications for belladonna are dullness, hebetude, dilated pupils, to put it in one word, congestion.—*Eclectic Med. Glean.* 1911, v. 7, pp. 435-436.

Waterhouse, E. R., asserts that belladonna will always abort an inflammation if it is used in the exact early stage, be it a pneumonia or any other inflammatory action, aside from a trauma.—*Eclectic M. J.* 1911, v. 71, pp. 217-221.

Majumdar, P. C., states that, in the treatment of odontalgia, or toothache, belladonna is frequently useful in children and females.—*Hahnemann. Month.* 1911, v. 46, p. 634.

An unsigned abstract (*Ind. Hom. Rep.*) states that the indication for belladonna is severe hiccough, so that it jerks the patient up, even with a sensation of suffocation.—*J. Am. Inst. Homœop.* 1911, v. 3, p. 76.

BELLADONNA RADIX.

Kebler, L. F., states that consignments of this root often contain "punky" belladonna root, and the drug is frequently mixed with such foreign agents as poke root, scopola root, etc.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 20.

Schneider, Albert, reports on one sample of belladonna root, which was adulterated with scopola root and other foreign tissue.—Pacific Pharm. 1911, v. 5, p. 177.

Wiley, H. W., reports finding belladonna root containing ground olive pits.—Ann. Rep. U. S. Dept. Agric. 1911, 1912, p. 424.

Rusby, H. H., notes that cases have occurred where a miller has added large amounts of inert matter to belladonna root, but not enough to reduce the alkaloidal percentage below the minimum, his defense being that in this way his action tended to bring about a desirable uniformity in the strength of the article.—Pharm. Era, 1911, v. 44, p. 141.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 122–123) discuss the valuation of belladonna root and present a table showing the requirements included in several pharmacopœias.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 15) point out that the Keller method is apt to give misleading results with abnormally dried specimens of belladonna root, the maceration with ether in such cases apparently not giving sufficient penetration.

Ferguson, George A., reports on 1 sample of belladonna root, containing 0.5510 per cent mydriatic alkaloids.—Proc. New York Pharm. Assoc. 1911, p. 153.

Vanderkleed, Chas. E., reports 11 assays of belladonna root; lowest 0.434 per cent, highest 0.746 per cent mydriatic alkaloids; 9 above and 2 below standard.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 14) report the assay of 16 samples of belladonna root which were found to contain from 0.15 to 0.58 per cent of hyoscyamine. They add that the alkaloid strength of all samples has been consistently low this season.

Coblentz, Virgil, reports that samples of fluid extract of belladonna, dispensed in various pharmacies in New York City, were all far below normal standards.—J. Ind. & Eng. Chem. 1911, v. 3, p. 540.

Dohme and Engelhardt point out that the assay process for fluid extract of belladonna is satisfactory. It is, however, advisable to increase both the amount of the immiscible solvent and the acidulated water.—Am. J. Pharm. 1911, v. 83, p. 520.

LaWall and Meade report the assay of a sample of fluid extract of belladonna, at least 30 years old, which was found to contain 0.375 gm. of mydriatic alkaloids per 100 cc.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 104.

Cowley, R. C., states that it is by no means unusual to find fluid extracts of belladonna marked Ph. Brit. which are almost of an inky black color instead of a dark wine red.—Chem. & Drug. Australas. 1911, v. 26, p. 199.

BENZALDEHYDUM.

Murray, B. L., points out that the U. S. P. recognizes a benzaldehyde "containing not less than 85 per cent of pure benzaldehyde," but then requires it to boil at "179° to 180°." This boiling point requirement can only be met by a benzaldehyde of practically 100 per cent purity.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 13. See also Pharm. Era, 1911, v. 44, p. 11.

Düsterbehn, F., notes that the Ph. Germ. V describes benzaldehyde as a colorless or slightly yellowish, strongly refractive liquid that is readily miscible with alcohol and ether and only slightly soluble in water. The boiling point is given as 208°, and the specific gravity at 20° as 1.204.—Apoth.-Ztg. 1911, v. 26, p. 146. See also Pharm. J. 1911, v. 86, p. 581.

Schneider, A., describes the method of separating benzaldehyde from oil of bitter almonds and the making of the product. Also discusses the synthetic production from toluol and points out that both preparations are included in the Ph. Germ. V description.—Pharm. Zentralh. 1911, v. 52, p. 566.

Schimmel & Co. (Sem-Annual Report, April, 1911, p. 127) in discussing the Ph. Germ. V requirements for benzaldehyde, state that the odor of this article resembles that of bitter almond oil. They assert that the specific gravity indicated by the Ph. Germ. V is incorrect; pure benzaldehyde has a specific gravity (at 15°) of from 1.050 to 1.055.

Smith, F. G., presents a note on the determination of benzaldehyde in liqueurs, distilled liquors, and cordials.—Proc. Assoc. Off. Agric. Chem. 1911, 28th Ann. Conv., pp. 192-195. (Bull. Bur. Chem. U. S. Dept. Agric. 1912, No. 152.)

Wirth, P. H., reports some observations on the determination of hydrocyanic acid and benzaldehyde in aqueous solutions.—Pharm. Weekblad, 1911, v. 48, pp. 1049-1055, 1065-1078.

Herzog, J., outlines a method for determining the chlorine content of benzaldehyde.—Ber. pharm. Gesellsch. 1911, v. 21, p. 202. See also pp. 536-538.

BENZINUM.

Düsterbehn, F., states that the Ph. Germ. V now describes petroleum benzin as having a characteristic odor and being readily miscible with ether and with absolute alcohol, but insoluble in water.—Apoth.-Ztg. 1911, v. 26, p. 146. See also Pharm. J. 1911, v. 86, p. 581.

Linke, H., notes that the Ph. Germ. V permits the use of a decidedly heavier petroleum benzin than did the Ph. Germ. IV. The present specific gravity requirement 0.666 to 0.686 complies very nearly with the so-called motor benzin now generally used in Germany.—Ber. pharm. Gesellsch. 1911, v. 21, p. 184.

Gehe & Co. (Handelsbericht, 1911, p. 127) report that the consumption of petroleum benzin in Germany has again increased materially owing to the reduction in price brought about by active competition between the two producing companies, the Asiatic Petroleum Co. and the Standard Oil Co.

Rosenthaler, Theodor, discusses the storing of petroleum benzin and other readily inflammable liquids.—Ztschr. ang. Chem. 1911, v. 24, pp. 289-290.

Chercheffsky, N., outlines a method for the detection of naphtha and its derivatives.—Ann. chim. analyt. 1911, v. 16, pp. 45-50.

BENZOINUM.

Lloyd, John Uri, states that benzoin escaped the attention of the Greeks and Romans, and the drug was not introduced into Europe until about 1490, when a second Doge of Venice was presented with a large amount by the Sultan of Egypt.—Bull. Lloyd. Libr. 1911, No. 18, p. 9.

Strueff, N., presents a contribution on the question of differentiating the trees supplying the several kinds of benzoin. He gives illustrations showing some of the structural characteristics of the leaves, hairs, and bark of *Styrax benzoin* from Siam, Sumatra, and Java.—Arch. Pharm. 1911, v. 249, pp. 10-21.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, April, p. 76) report that fine qualities of Siamese benzoin have been very scarce for some time past. See also October, p. 75; and Schimmel & Co. Semi-Annual Report, Oct. 1911, p. 111.

Beringer, George M., states that the Ph. Germ. V requires that on extraction of benzoin with boiling alcohol the residue on drying must not exceed 5 per cent of its weight.—Am. J. Pharm. 1911, v. 83, p. 330. Also Proc. New Jersey Pharm. Assoc. 1911, p. 78.

Rusby, H. H., states that one of the greatest difficulties with which the Government has to contend in connection with benzoin is the failure of the Pharmacopœia to specify the allowable amounts of the different kinds of impurity.—Oil, Paint, and Drug Reporter, 1911, v. 80, Nov. 20, p. 28K. Also Pharm. Era, 1911, v. 44, p. 140.

Schneider, Albert, reports on a sample of benzoin which was adulterated with 60 per cent of bark tissue.—Pacific Pharm. 1911, v. 5, p. 178.

Amos, W. S., reports that a sample of benzoin contained full 2 per cent ash and was not wholly soluble in 5 parts of warm alcohol.—Proc. Missouri Pharm. Assoc. 1911, p. 97.

Bernegau, L. H., reports that of 20 lots examined, the percentage of alcohol soluble matter ranged from 68.4 to 91.8 per cent, the average being 82.8 per cent. The average ash content was 1.4 per cent, the range being from 0.44 to 3.32 per cent; only 6 containing more than the limit of 2 per cent.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 120.

Ferguson, George A., reports on 3 samples of benzoin varying from 1.55 to 2.13 per cent in ash content; and containing from a trace to 33.67 per cent of alcohol insoluble matter.—*Proc. New York Pharm. Assoc.* 1911, p. 152.

Howard, Charles D., reports that of 3 samples of powdered gum benzoin examined 2 were apparently of standard quality. The third sample was found to be almost totally devoid of the characteristic odor of benzoin, even on heating. The ash content of this sample (3.46 per cent) is thought to be excessive. *New Hampshire San. Bull.* 1911, v. 3, No. 13, p. 255.

Parry, Ernest J., gives the following results of his examination of some 30 samples of benzoin: Siam, ash, 0.24 to 1.77 per cent; 89 to 96.5 per cent soluble in 90 per cent alcohol; acid values, 126 to 158; ester values, 40 to 70. Sumatra, ash, 0.40 to 1.82 per cent; 91 to 94 per cent soluble in 90 per cent alcohol; acid value, 98 to 142; ester value, 58 to 98.—*Chem. & Drug.* 1911, v. 78, p. 378.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 15) report on 3 samples of Siam benzoin which contained from 0.9 to 9.8 per cent of matter insoluble in 90 per cent alcohol, from 2.6 to 2.7 per cent of free acid, and from 24.2 to 28.44 per cent of combined acid.

van Itallie, E. I., reports on 8 samples of benzoin which were found to contain from 0.6 to 20.5 per cent of material insoluble in alcohol; 4 of the samples were found to contain from 0.1 to 1.27 per cent of ash.—*Pharm. Weekblad*, 1911, v. 48, p. 282.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, states that certain gum resins are mixed with débris of bark and stones, and leave a considerable insoluble residue when extracted with boiling alcohol.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 228; and *J. Pharm. Anvers*, 1911, v. 67, p. 517.

Brunker, J. E., reports that of 31 samples of compound tincture of benzoin examined the average extractive was 17.7 gm. in 100 mls; alcohol by volume, 73.8 per cent.—*Brit. & Col. Drug.* 1911, v. 60, p. 229.

Diekman, George C., reports the opinion that the directions to triturate the drugs in the making of tincture of benzoin and compound tincture of benzoin are not practical. Maceration in a suitable container, with frequent agitation, is sufficient.—*Proc. New York Pharm. Assoc.* 1911, p. 81.

The Biennial Report of the Inspection of Pharmacies, 1909-1910, states that tincture of benzoin sometimes is too poor in dried extract; it has also been found prepared with methyl alcohol.—Bull. Soc. pharm. roy. Brux. 1911, v. 55, p. 240; and J. Pharm. Anvers, 1911, v. 67, p. 564.

BENZOSULPHINIDUM.

The Committee of Reference in Pharmacy (Third Report, p. 5) present a new monograph for glusidum, omitting certain of the present characters and tests. See also Pharm. J. 1911, v. 87, p. 554.

An unsigned review (Chem. & Drug. 1911, v. 79, p. 788) states that the solubility of gluside in alcohol is given by the B. P. C. 1911 as 1 in 30, whereas the solubility in 90 per cent alcohol is 1 in 38.

Craig, Hugh, reports a discussion as to the propriety of recognizing sodium salt of saccharin and notes that its extensive use in pediatrics was pointed out.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 607.

Stockinger, Otto, reports that 2 samples of saccharin were examined which showed melting points of 226° and 228°. A certified thermometer was used, and correction was made for the emergent stem. The U. S. P. requires a melting point of 219° to 220°.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 128.

Brown, Lucius P., calls attention to the decision of the Referee Board, that saccharin in quantities of over 0.3 gm. is liable to impair the digestion, and that the addition of saccharin as a substitute for cane sugar or other forms of sugar reduces the food value of the sweetened product and hence lowers its quality.—Proc. Tennessee Pharm. Assoc. 1911, p. 89.

Barnard, H. E., in the referee report on preservatives, points out that saccharin, while not a true preservative, is, probably because of impurities present, of some value in inhibiting spoilage, and for that reason it is classed by all the collaborators as a preservative.—Proc. Assoc. Off. Agric. Chem. 1911, 28th Ann. Conv. p. 167. (Bull. Bur. Chem. U. S. Dept. Agric. 1912, No. 152.)

Woods, Charles D., presents a resolution commending the recent action of the Referee Board in condemning saccharin in commercial food products and making it unlawful to so use it.—Proc. Maine Pharm. Assoc. 1911, p. 53.

Strode, S. E., Ohio Food and Drug Commissioner, publishes a ruling ordering the discontinuance of saccharin in food and drug products after January 1, 1912.—Midl. Drug. 1911, v. 45, p. 559.

An unsigned note (J. Ind. & Eng. Chem. 1911, v. 3, p. 438) commenting on the proposed restricting of the use of saccharin in food, as outlined in Food Inspection Decision 135, asserts that 0.3 gm. of saccharin possesses the sweetening power of 165 gm. of cane sugar, and points out that it is hardly conceivable that any one person would daily digest such an amount of saccharin in food and beverage.

Food Inspection Decision 135 (Apr. 26, 1911) states that in view of the report of the Referee Board, the Secretary of Agriculture will regard as adulteration under the food and drugs act foods containing saccharin which, on and after July 1, 1911, are manufactured or offered for sale in the District of Columbia or the Territories, or shipped in interstate or foreign commerce or offered for importation into the United States. Food Inspection Decision 138 (June 20, 1911) amends the above by changing the date to January 1, 1912.

An editorial (*Pract. Drug.* 1911, v. 29, June, p. 25, states that it is openly hinted that it is not so much concern for American digestive organs as the wish of the Sugar Trust which is back of the order prohibiting the use of saccharin in foodstuffs.

Ladd, E. F., states that a great deal has been said with regard to the use of saccharin, and in a few States this product is not permissible in any class of food products or beverages. North Dakota was the first State by statute to prohibit this product.—*Bull. Agric. Exper. Sta. North Dakota*, 1911, v. 1, No. 37, p. 431.

BERBERIS.

Lloyd, John Uri, states that berberis was introduced to medicine by Bundy, an Eclectic physician of California.—*Bull. Lloyd Libr.* 1911, No. 18, p. 9. See also *Rocky Mountain Druggist*, 1911, v. 25, Apr., p. 40.

Rusby, H. H., asserts that the species now included under the title of berberis are regarded by modern botanists as comprising two genera.—*Pharm. Era*, 1911, v. 44, p. 94.

Kiczka, M., reviews the present status of our knowledge of the berberis alkaloids.—*Pharm. Prax.* 1911, v. 10, pp. 259-260.

Freund, Martin, reports further on the chemistry of berberine.—*Chem. Ztg.* 1911, v. 35, pp. 1090-1091. See also *Pharm. Post*, 1911, v. 44, p. 879.

Tinkler, Charles Kenneth, discusses the chemistry and constitution of berberine.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 1340-1347.

Pictet and Gams report on the synthesis of berberine.—*Ber. deutsch. chem. Gesellsch.* 1911, v. 44, pp. 2480-2485.

Reed, A. P., states that berberis will be found to combine better than hydrastis and answer most of its uses.—*Eclectic Med. Glean.* 1911, v. 7, p. 598.

BETANAPHTHOL.

Wood, Horatio C., Jr., in an article on the possibility of intestinal antiseptics, calls attention to the evident limitations of the use of betanaphthol as an intestinal antiseptic.—*Therap. Gaz.* 1911, v. 35, pp. 153-156.

Schultz, W. H., discusses the use of betanaphthol as a remedy in the treatment of hookworm disease and points out that in equal

doses betanaphthol seems to be less active than thymol. It is quite probable that the difference in activity is in proportion to their relative toxicity for the host.—*Tr. Am. M. Assoc. Sec. Pharm. & Therap.* 1911, pp. 52–53; also *J. Am. M. Assoc.* 1911, v. 57, pp. 1102–1106.

BISMUTHI ET AMMONII CITRAS.

Cowley, R. C., criticizes the *Ph. Brit.* process for the solution of bismuth and ammonium citrate and recommends, with slight alteration, the formula devised by Cowley and Catford (*Pharm. J.* Dec. 23, 1899).—*Pharm. J.* 1911, v. 86, p. 131; also *Chem. & Drug. Australas.* 1911, v. 26, p. 54.

Dunn, W. R., in a paper on home-made chemicals, outlines a method for the preparation of bismuth citrate. He claims that the freshly made salt is infinitely more soluble in ammonium hydrate than is the commercial article.—*Brit. & Col. Drug.* 1911, v. 60, p. 56.

BISMUTHI OXIDUM HYDRATUM N. F.

Dunn, W. R., in a paper on home-made chemicals, outlines a simple method for the preparation of bismuth oxide by boiling the subnitrate with sodium hydroxide.—*Brit. & Col. Drug.* 1911, v. 60, p. 56.

BISMUTHI SUBCARBONAS.

Vanino, L., discusses the composition and the chemistry of bismuth subcarbonate and points out the desirability of including in the *Pharmacopœia* a process for making this preparation so as to insure uniformity in composition.—*Pharm. Zentralh.* 1911, v. 52, pp. 761–762. See also *Ztschr. allg. Österr. Apoth.-Ver.* 1911, v. 49, p. 345.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 16) report that no more than one part per million of arsenic has been observed in subcarbonate.

Southall Bros. & Barclay (*Rep.* 1911, Birmingham, 1912, p. 34) report that they have experienced some difficulty in obtaining both bismuth carbonate and bismuth subnitrate free from chlorides.

Stingel, J. L., discusses the fixation of sulphide by basic bismuth compounds, and reports a number of experiments which tend to show that the suspensions of the various basic bismuth salts are practically equally effective in binding H_2S , but in old magma this property is impaired.—*Am. J. Pharm.* 1911, v. 83, pp. 412–413.

Metzger, L. (*Med. Klin.* v. 7, No. 23) reports unfavorable results from the use of bismuth carbonate in Roentgen examination, and urges the importance of clearing out the intestines, not allowing the bismuth to stagnate.—*J. Am. M. Assoc.* 1911, v. 57, p. 255.

BISMUTHI SUBGALLAS.

Düsterbehn, F., notes that the Ph. Germ. V now includes the old trade name for bismuth subgallate "dermatol" as a synonym.—Apoth.-Ztg. 1911, v. 26, p. 154. See also Pharm. Ztg. 1911, v. 56, p. 572.

The Paris Pharmaceutical Society suggests that 1 gm. of bismuth subgallate should leave a residue of about 0.52 gm. of anhydrous bismuth oxide.—J. Pharm. et Chim. 1911, v. 4, p. 435.

Heeve, William L., adds bismuth subgallate to bismuth subnitrate in the treatment of chronic diarrhoea where there is great irritation and large watery stools.—Nat. Eclect. M. Assoc. Quart. 1910-1911, v. 2, p. 121.

Rössle (Münch. med. Wehnschr. 1911, p. 279) reports three cases in which the intoxication following upon the use of dermatol ended fatally. See also L. Dorn (Beitr. klin. Chir. v. 70).—Merck's Ann. Rep. 1911, v. 25, p. 209.

BISMUTHI SUBNITRAS.

Düsterbehn, F., states that the Ph. Germ. V in describing bismuth subnitrate calls particular attention to the production of the black color when the substance is mixed with a solution of hydrogen sulphide.—Apoth.-Ztg. 1911, v. 26, p. 155. (See also Pharm. J. 1911, v. 86, p. 851; and Chem. & Drug. 1911, v. 78, p. 13.)

Romijn, G., discusses the composition of bismuth subnitrate and its differentiation from bismuth nitrate.—Pharm. Weekblad, 1911, v. 48, pp. 694-695.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 34) report that they have experienced some difficulty in obtaining both bismuth carbonate and bismuth subnitrate sufficiently free from chlorides.

Street, John Phillips, reports examining 25 samples of bismuth subnitrate which were found to vary from 80.01 per cent to 82.36 per cent of bismuth oxide and to have a moisture content of from 2.98 to 4.18 per cent. While there was no serious excess of moisture in any case, yet only 1 sample fell within the U. S. P. limits.—Rep. Connecticut Agric. Exper. Sta. for 1910, 1911, pp. 558-559.

Puckner and Hilpert report a further examination of commercial tablets of bismuth, opium, and phenol and present their findings in the form of a chart, showing the claimed and the contained content of the several ingredients.—Rep. Chem. Lab. Am. M. Assoc. 1911, v. 4, pp. 22-25.

Seel and Friederich report the examination of a number of samples of tablets of bismuth subnitrate, and present the results of their

examination in the form of a table.—*Pharm. Zentralh.* 1911, v. 52, p. 1087 ff.

Tyrode, Maurice Vejux, reviews recent literature with reference to bismuth subnitrate and notes that the carbonate and oxide have been found to be very inferior to the subnitrate in stimulating the secretion of mucus though they are of some value in hyperacid conditions on account of the basic nature of these salts.—*Boston M. & S. J.* 1911, v. 164, p. 684.

An editorial (*Lancet*, 1911, v. 181, p. 1784) calls attention to the successful treatment of amoebic dysentery with heroic doses of bismuth subnitrate, reported by Deeks and Shaw from the Ancon Hospital.

Heeve, William L., states that, in the treatment of chronic diarrhoea, bismuth is never of service in the weak, emaciated condition, with excessive lack of tone.—*Nat. Eclect. M. Assoc. Quart.* 1910–1911, v. 2, p. 121.

Folse, Charles D., reports successful results from bismuth paste in the induced abscesses resulting from the use of the trocar and cannula. *Am. Vet. Rev.* 1911, v. 39, p. 567.

Goldberg, Harry A., discusses the use of bismuth paste in the treatment of pyorrhœa alveolaris.—*Dental Cosmos*, 1911, v. 53, pp. 551–557.

Riedel's *Berichte* (1911, pp. 53–54) reviews some of the recent literature relating to the toxicity of bismuth subnitrate in connection with X-ray work, and points out that the Roentgen rays appear to influence the proliferation of the intestinal flora and that these bacteria in turn appear to have considerable influence on the production of nitrites from bismuth subnitrate.

Willard, De Forest P., comments on the use of bismuth vaselin paste in the treatment of chronic sinuses, and presents a table enumerating the reported cases.—*Therap. Gaz.* 1911, v. 35, pp. 761–763.

Mitchell, James R., recommends chalk paste as an improvement on, and substitute for, Beck's bismuth paste.—*J. Am. M. Assoc.* 1911, v. 57, p. 394.

BISMUTHI SUBSALICYLAS.

Düsterbehn, F., expresses the belief that the introduction of a method for making bismuth subsalicylate into the Ph. Germ. V is a step in the right direction, as it tends to insure a uniform preparation.—*Apoth.-Ztg.* 1911, v. 26, p. 155. See also *Pharm. J.* 1911, v. 86, p. 581; and *Chem. & Drug.* 1911, v. 78, p. 13.

Caron and Raquet outline a colorimetric method for the estimation of bismuth salicylate.—*Répert. pharm.* 1911, v. 23, p. 99; also *Ann. chim. analyt.* 1911, v. 16, p. 177.

Nyman and Björkstén report a study of the composition of bismuth subsalicylate and call attention to the requirements made by the several pharmacopœias for this substance.—*Pharm. Zentralh.* 1911, v. 52, pp. 423–428.

A communication from *Chemischen Fabrik auf Aktien* (vorm. Schering) in Berlin, commenting on an article on bismuth subsalicylate, states that that firm makes different varieties of bismuth subsalicylate and that some of the varieties made for export will not comply with the Ph. Germ. V requirements.—*Ibid.* p. 541.

BROMOFORMUM.

Düsterbehn, F., points out that the Ph. Germ. V bromoform is a mixture of about 96 per cent bromoform with approximately 4 per cent of absolute alcohol. The specific gravity is given as from 2.829 to 2.833, and the temperature of solidification as varying from 5° to 6°. At a temperature of from 148° to 150° at least 90 volume per cent of the bromoform should be volatilized.—*Apoth.-Ztg.* 1911, v. 26, p. 155. See also *Pharm. J.* 1911, v. 86, p. 581.

Feist and Garnier report observations on the physical constants of bromoform as given in the Ph. Germ. V and point out that it would be desirable to give in connection with the boiling point the atmospheric pressure at which this is to be determined.—*Arch. Pharm.* 1911, v. 249, pp. 458–463.

Gauthier, L. (*Bull. Pharm. Lyon*, 1911, p. 61) describes a differential reaction for chloroform and bromoform.—*Bull. pharm. Sud-Est*, 1911, v. 16, p. 454.

Waterhouse (*Bristol Med.-Chir. J.*), discussing bromoform poisoning, states that most of these cases occur in children who are taking bromoform to control whooping cough.—*Western Druggist*, 1911, v. 33, p. 93.

BROMUM.

Sharp, Gordon, presents a short history of bromine, the bromides, and other bromine compounds employed in medicine.—*Pharm. J.* 1911, v. 87, p. 128.

Düsterbehn, F., points out that the Ph. Germ. V gives the boiling point of bromine as about 63°. The specific gravity is given as being approximately 3.1, while the specific gravity found in the literature is usually given as from 2.97 to 2.99 at 15°.—*Apoth.-Ztg.* 1911, v. 26, p. 155. See also *Pharm. J.* 1911, v. 86, p. 581.

Joseph and Jinendradasa report observations on the color and constitution of bromine solutions.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 274–282.

Goldbaum, Jacob S., reports a determination of the ratio between chlorine and bromine and sodium.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 35–50.

Bray and Connolly present a correction on the hydrolysis of iodine and of bromine.—*Ibid.* pp. 1485–1487.

Labat, A., makes a contribution to the study of the presence of bromine in the human organs.—*Bull. Soc. chim. France*, 1911, v. 9, pp. 393–398.

BUCHU.

Lloyd, John Uri, states that the Hottentots of the Cape of Good Hope used the leaves of the buchu plant as a domestic remedy, and from them the colonists derived their information concerning it.—Bull. Lloyd Libr. 1911, No. 18, p. 10.

True, R. H., reports that experiments have been made in the cultivation of buchu. The chief difficulty is getting seed of desirable plants.—Proc. N. W. D. A. 1911, p. 169.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for buchu: water content, 8.52 per cent; ash content, 4.98 per cent; alkalinity of water soluble ash, 1.20 per cent; total alkalinity of ash, 6.66 per cent.—Proc. Ohio Pharm. Assoc. 1911, p. 70.

Rusby, H. H., reports having frequently seen buchu leaves to which had been added their own weight of stems, chopped as fine as coarse sand.—Proc. Vermont Pharm. Assoc. 1911, p. 83. See also Pharm. Era, 1911, v. 44, p. 95.

Kebler, L. F., states that buchu always contains greater or less quantities of foreign material such as stems, twigs, old worthless leaves, and the leaves of other plants.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 19.

An editorial (*Ibid.* p. 5) endorses the suggestion that the U. S. P. permit the presence of 10 per cent of stems, twigs, and worthless leaves in buchu leaves.

Rusby, H. H., states that the demand for buchu in the United States has exceeded the supply.—Oil, Paint, and Drug Reporter, 1911, v. 80, Nov. 20, p. 28K.

Miller, Adolph W., reports that samples of buchu have been received from London having a strongly pronounced taste and a somewhat mint like flavor. It is quite possible that the prevailing high prices have induced the collectors to pick leaves of other species of *barosma* differing from the official *B. betulina*.—Proc. N. W. D. A. 1911, p. 91.

Mansfield, William, presents with illustrations some remarks on adulteration with special reference to buchu.—Drug. Circ. 1911, v. 55, pp. 240-243.

An editorial note (Pharm. J. 1911, v. 87, p. 522) warns pharmacists of the occurrence of *Barosma venusta*, *B. pulchella*, *B. lanceolata*, and *Adenandra fragrans*, as substitutes for the official *B. betulina*. See also Chem. & Drug. 1911, v. 78, p. 854.

Holmes, E. M., describes an adulterant of buchu consisting of leaflets, probably those of *Psoralea obliqua*, E. Mey.—Montreal Pharm. J. 1911, v. 22, pp. 5-6.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 23) report that buchu leaves of unimpeachable quality have been obtainable only at fancy prices.

Wiley, H. W., reports buchu leaves containing a large excess of stems.—Ann. Rep. U. S. Dept. Agric. 1911, 1912, pp. 424, 430.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 17) report that a sample of the *Barosma venusta* variety from the Agricultural Department, Capetown, of unknown clinical value, had some morphological resemblance to the *B. betulina*, but was of quite erect habit and of different odor.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, p. 23) report that oil of buchu leaves plays only a secondary part at the present time owing to the scarcity of the drug itself. It is said that buyers in the United States are prepared to pay prices for buchu leaves which put the production of the oil altogether outside the range of practicability.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 17) report that 1 genuine sample of this oil, decanted from the diosphenol, gave a specific gravity of 0.9468; optical rotation, $+0.5^\circ$; refractive index, 1.4773; and was soluble in 80 per cent alcohol, 1.75 volumes. The oil had a characteristic mint like odor.

BUCHU (LONG).

Lilly, J. K., reports that good short buchu has been scarce and high, and the revisers of the forthcoming Pharmacopœia purpose to allow the use of long buchu.—Proc. N. W. D. A. 1911, p. 161.

Rusby, H. H., thinks that the readmission of long buchu to the Pharmacopœia and its strict regulation is loudly called for by the conditions existing in the drug market at the present time.—Oil, Paint, and Drug Reporter, 1911, v. 80, Nov. 20, p. 28K. See also Proc. New York Pharm. Assoc. 1911, p. 288; and Midl. Drug. 1911, v. 45, p. 343.

CAFFEINA.

Lloyd, Gordon, states that caffeine, the active principle in coffee and tea, was first extracted by Runge in 1820.—Rocky Mountain Drug-gist, 1911, v. 25, Mar., p. 43.

Düsterbehn, F., points out that the Ph. Germ. V now gives the solubility of caffeine in alcohol as being 1:50. He also comments on the melting point of caffeine and notes that the official Ph. Germ. V requirement does not correspond to that usually found in the literature.—Apoth.-Ztg. 1911, v. 26, p. 172.

Poulenc, Camille, reports a suggested correction as to solubility in boiling water, 2 parts instead of 10.—J. Pharm. et Chim. 1911, v. 4, p. 436.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 581) states that the melting point is given as 234° to 235° , instead of 230.5° .

An unsigned article (New Idea, 1911, v. 33, pp. 200–201) describes and illustrates the commercial production of caffeine.

Burmam, James, proposes an exact method for the estimation of caffeine in tea and in coffee, green and roasted.—*Ann. falsif.* 1911, v. 4, pp. 99–101.

Biltz, Heinrich, reports observations on the chemistry of hypoxanthine.—*Ber. deutsch. chem. Gesellsch.* 1911, v. 44, pp. 282–305.

Sundwik, Ernst Edward, outlines a method for the production of xanthin and hypoxanthin from uric acid.—*Ztsch. physiol. Chem.* 1911–12, v. 76, pp. 486–488.

Monthule, C., presents a note on the estimation of theobromine and caffeine.—*Ann. chim. analyt.* 1911, v. 16, p. 137. See also *Répert. pharm.* 1911, v. 23, p. 50.

Lehmann and Müller discuss the determination of caffeine in caffeine sodium salicylate and similar preparations.—*Apoth.-Ztg.* 1911, v. 26, pp. 647–648. See also *Schweiz. Wchnschr. Chem. u. Pharm.* 1911, v. 49, p. 616.

Emery, W. O., in the referee report on headache mixtures, calls attention to a method for determining caffeine. (*Bull. Bur. Chem.* No. 132, p. 197)—*Proc. Assoc. Off. Agric. Chem.* 1911, 28th Ann. Conv. pp. 236–241. *Bull. Bur. Chem. U. S. Dept. Agric.* 1912, No. 152.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, notes that caffeine is sometimes kept only in a simple sack and is dehydrated and effloresced.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 234, also *J. Pharm. Anvers*, 1911, v. 67, p. 522.

The Editor of the "Therapeutics" column (*J. Am. M. Assoc.* 1911, v. 56, p. 1328) discusses the origin, history, pharmacology, toxicology, and therapy of caffeine.

Wiley, H. W., calls attention to a pharmacological investigation on the comparative toxicity of caffeine in different species of animals.—*Ann. Rep. U. S. Dept. Agric.* 1911–12, p. 436.

Schürhoff points out that the continued use of large quantities of caffeine will produce cardiac irregularity and sleeplessness.—*D.-A. Apoth.-Ztg.* 1911–12, v. 32, p. 4.

Salant and Phelps report observations on the demethylation of caffeine and theobromine under pathological conditions.—*J. Pharmacol. & Exper. Therap.* 1911–12, v. 3, p. 469.

Salant and Reiger, in a report on the toxicity of caffeine, point out that the toxicity of caffeine in the rabbit varies with the mode of its administration, being least when given by mouth and greatest by intravenous administration.—*Ibid.* pp. 455–457.

Sollmann and Pilcher report a comprehensive study of the action of caffeine on the mammalian circulation.—*Ibid.* pp. 19–92.

Pilcher, J. D., reports observations on the action of caffeine on the mammalian heart.—*Ibid.* pp. 609–624.

Salant, William, reports observations on the effect of caffeine on the circulation.—*Ibid.* pp. 468–469.

Salant and Reiger report observations on the elimination of caffeine.—*Ibid.* pp. 469–470.

Pilcher, J. D., reports a study of the antagonism and synergism of alcohol and caffeine to determine the value of caffeine in alcoholic poisoning and the reverse.—*Ibid.* pp. 267–298.

Zanda, Giovanni Battista, discusses the influence of caffeine on the ureopoetic function of the liver *in vitro*.—*Arch. farmacol. Sper.* 1911, v. 11, pp. 125–134.

Tyrode, Maurice Vejux, calls attention to the work of Salant which confirms the idea that both tea and coffee are very undesirable in all forms of gastro-enteric disease, on account of the local irritant effect, besides the action on the nervous system.—*Boston M. & S. J.* 1911, v. 164, p. 686.

An unsigned article (*Lancet*, 1911, v. 181, pp. 1573–1576) discusses the chemistry, physiology, and æsthetics of a cup of tea. See also *Ibid.* v. 180, pp. 46–49.

Bardet reports a case of acute poisoning in an individual who imbibed "Sanka," a caffeineless coffee.—*J. Pharm. et Chim.* 1911, v. 4, p. 235.

CAFFEINÆ SODIO-SALICYLAS N. F.

Düsterbehn, F., points out that the Ph. Germ. V gives the solubility of caffeine sodium salicylate in alcohol as 1:50.—*Apoth.-Ztg.* 1911, v. 26, p. 172.

CALAMUS.

Lloyd, John Uri, states that the use of calamus in the domestic medication of India is recorded from the very earliest times.—*Bull. Lloyd Libr.* 1911, No. 18, p. 10; also *J. Therap. & Diet.* 1911, v. 5, p. 228.

Holm, Theo., describes and illustrates the rhizome, scape with fruit bearing spadix, and the structural characteristics of *Acorus calamus* L.—*Merck's Rep.* 1911, v. 20, pp. 277–281.

Hartwich, C., states that the Ph. Germ. V description of calamus is still incomplete. He questions the propriety of restricting the official drug to a peeled rhizome rather than admitting the unpeeled drug which, as Tschirch and Oesterle point out, would tend to retain the volatile oil.—*Apoth.-Ztg.* 1911, v. 26, p. 85. See also *Pharm. J.* 1911, v. 86, p. 654.

CALCI BROMIDUM.

Dunn, W. R., in a paper on home-made chemicals, outlines a simple method for preparing calcium bromide by neutralizing and evaporating hydrogen bromide and calcium carbonate.—*Brit. & Col. Drug.* 1911, v. 60, p. 57.

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Baxter and Warren report some experimental observations on the efficiency of calcium bromide, zinc bromide, and zinc chloride as drying agents.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 340–344.

Jones, Eli G., states that calcium bromide is the needed remedy in children who are nervous, irritable, grow fast but flesh is not solid, walk with difficulty, teeth come very slow, there is gastric, intestinal, and cerebral irritation.—*J. Therap. & Diet.* 1911, v. 5, p. 169.

CALCII CARBONAS PRÆCIPITATUS.

Düsterbehn, F., points out that the Ph. Germ. V requires that precipitated calcium carbonate be insoluble in water and be soluble with effervescence in acids. The presence of water soluble salts is restricted to 0.3 per cent.—*Apoth.-Ztg.* 1911, v. 26, p. 155.

Pearson, W. A., reports that 1 sample of calcium carbonate was examined which contained an excess of heavy metals, and the amount of insoluble substances in hydrochloric acid was excessive.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 120; also *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 344.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 35) report that a sample of "Calcii Carbonas Præcipitatus" drawn from their ordinary stock proved to possess the following composition: Calcium carbonate (CaCO_3), 99.13 per cent; ferric oxide and alumina ($\text{Fe}_2\text{O}_3 + \text{Al}_2\text{O}_3$), 0.28 per cent; magnesia (MgO), 0.29 per cent; chlorine (Cl), 0.02 per cent; siliceous matter, 0.01 per cent; very small traces of sulphates and phosphates.

CALCII CHLORIDUM.

Murray, B. L., notes that, officially, calcium chloride is in the form of fragments; sticks are not mentioned in the U. S. P. The exact forms of U. S. P. articles should be specified.—*Pharm. Era*, 1911, v. 44, p. 11; also *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 13.

Craig, Hugh, reports the opinion that two forms of calcium chloride are unnecessary and that the hydrated crystals can be kept but a very short time.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 607.

Richards and Hönigschmid, in a contribution on the revision of the atomic weight of calcium, discuss the analysis of calcium chloride.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 28–35; also *Monatsh. Chem.* 1911, v. 32, pp. 41–51.

Schreinemakers and Figeo report observations on the system water, calcium chloride, and calcium hydroxide at 25°.—*Chem. Weekblad*, 1911, v. 8, pp. 683–688.

Menge, Otto, reports experimental observations on the binary systems of MgCl_2 and CaCl_2 with other chlorides.—*Ztschr. anorg. Chem.* 1911, v. 72, pp. 162–218.

Smith, Kline & French Co. (Analytical Report, 1911, p. 15) reports that 2 samples of calcium were found to contain more iron than allowed by the U. S. P. standard.

Elliot, George, points out the practicability of covering the very bitter metallic taste of calcium chloride in mixtures by liquid extract of liquorice.—*Pharm. J.* 1911, v. 86, pp. 258–259.

Busquet and Pezzi report on the action of the chlorides of the alkaline earth metals when injected intravenously in the dog.—*Compt. rend. Soc. Biol.* 1911, v. 71, 560.

Meyer, Erich, discusses the use of calcium salts, more particularly calcium chloride, in cases of tetany accompanying pregnancy.—*Therap. Monatsh.* 1911, v. 25, pp. 411–414.

Cassidy, Maurice A., discusses the use of calcium salts as a prophylactic against serum rashes, with tabulated results of 50 cases.—*Lancet*, 1911, v. 181, p. 1695.

An editorial (*Am. J. Clin. Med.* 1911, v. 18, pp. 415–416) discusses the therapeutic applications of calcium chloride.

Additional references on the chemistry, pharmacology, and therapeutic uses of calcium chloride and other salts of calcium will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Zentralbl. Biochem. & Biophysik*; and *Chem. Centralbl.*

CALCIUM GLYCEROPHOSPHATE.

Malengreau and Prigent report observations on the rapidity of the hydrolysis of glycerophosphoric acid. They conclude that the decomposition increases considerably with temperature.—*Ztschr. physiol. Chem.* 1911, v. 73, pp. 68–84.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 18) report that 1 sample of calcium glycerophosphate examined did not agree with the Codex formula. Dicalcium diglycerophosphate was undoubtedly present.

Merck, E. (*Ann. Rep.* 1911, Darmstadt, 1912, v. 25, pp. 1–30), discusses glycerophosphates, with a general review of the literature.

CALCIUM HYPOPHOSPHITE.

Düsterbehn, F., states that the Ph. Germ. V describes calcium hypophosphite as being obtained by digesting finely divided yellow phosphorus with milk of lime at from 30 to 40°. Calcium hypophosphite is described as occurring in colorless, shining, odorless crystals or as a crystalline powder soluble in approximately 8 parts of water.—*Apoth.-Ztg.* 1911, v. 26, p. 155. See also *Pharm. J.* 1911, v. 86, p. 581.

The Paris Pharmaceutical Society suggests a slight change in the solubility requirement, 8 instead of about 6 parts of cold water.—*J. Pharm. et Chim.* 1911, v. 4, p. 436.

Rupp and Kroll outline a titrimetric method for determining hypophosphorous acid in calcium hypophosphite by using the potassium bromate and bromide solution directed by the Ph. Germ. V for the determination of phenol.—Arch. Pharm. 1911, v. 249, pp. 493–497.

Feist, K., discusses the estimation of hypophosphorous acid in medicinal compounds.—Apoth.-Ztg. 1911, v. 26, pp. 253–254.

CALCIUM LACTATE.

Dunn, W. R., in a paper on home-made chemicals, outlines a simple method for preparing calcium lactate by dissolving calcium carbonate in warm dilute lactic acid, neutralizing, filtering while hot, and crystallizing.—Brit. & Col. Drug. 1911, v. 60, p. 57.

Moffitt, Herbert C., states that there can no longer be any question about the efficiency of calcium and parathyroid administration.—J. Am. M. Assoc. 1911, v. 57, pp. 452–458.

Dixon, W. E., states that calcium salts are only absorbed in healthy people with difficulty and very slowly, so that the calcium content of the blood is hardly altered by taking chalk, calcium lactate, or any other calcium salt by the mouth.—Pharm. J. 1911, v. 87, p. 15.

CALCII PHOSPHAS PRÆCIPITATUS.

Poulenc, Camille, reports a suggested correction of figures in the Codex statement as to the proportions represented in monoacid calcium phosphate.—J. Pharm. et Chim. 1911, v. 4, p. 436.

Hardy and Vandormael discuss the analysis of calcium phosphates as a guide to their transformation into superphosphates.—Bull. Soc. chim. Belg. 1911, v. 25, pp. 43–57.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 35) report that arsenical contamination has been met with in calcium phosphate, 20 parts per million having been recorded in one instance.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, states that the bicalcic phosphate sometimes contains tricalcic phosphate and leaves a heavy residue on incineration.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 234. J. Pharm. Anvers, 1911, v. 67, p. 522.

CALCII SULPHAS EXSICCATUS.

Düsterbehn, F., notes that the Ph. Germ. V requires that calcined calcium sulphate when mixed with one-half its weight of water should harden within 10 minutes, the former period of 5 minutes being recognized as all too short for complete hardening.—Apoth.-Ztg. 1911, v. 26, p. 156. See also Pharm. J. 1911, v. 86, p. 581.

An unsigned note (J. Ind. & Eng. Chem. 1911, v. 3, p. 946) calls attention to the gypsum production in the United States for 1910.

The amount mined aggregated 2,375,394 short tons, an increase over the figures for 1909 of more than 5 per cent in tonnage. See also *Exper. Sta. Rec.* 1911, v. 24, p. 325.

A news note (*Critic and Guide*, 1911, v. 14, p. 436) calls attention to the second edition of a book by Martin W. Ware, on "Plaster of Paris and How to Use It."

CALENDULA.

Lloyd, John Uri, states that marigold has been known practically from the beginning of documentary records in scientific or medical lines.—*Bull. Lloyd Libr.* 1911, No. 18, pp. 10–11.

Mitlacher, Wilhelm, reports that calendula develops exceptionally well on the well fertilized portion of the field.—*Pharm. Post*, 1911, v. 44, p. 203.

Dewey, W. A., states that, regardless of what else is done, succus calendulae is the best external dressing for cancer, running sores, blood injuries, etc.—*Hahnemann, Month.* 1911, v. 46, p. 631.

CALUMBA.

Hartwich, C., asserts that "Colombo" is incorrect and should be "Calumba."—*Apoth.-Ztg.* 1911, v. 26, p. 57.

Lloyd, John Uri, notes that calumba root has long been in use, under the name "Kalumb," among the African tribes of Mosambique.—*Bull. Lloyd Libr.* 1911, No. 18, pp. 11–13.

Kiczka, M., reviews the present status of our knowledge of the calumba alkaloids.—*Pharm. Prax.* 1911, v. 10, pp. 264–265.

Brunker, J. E., reports that of 101 samples of tincture of calumba examined, the average extractive was 1.19 gm. in 100 mls; alcohol by volume, 55.26 per cent.—*Brit. & Col. Drug.* 1911, v. 60, p. 229.

CALK.

Düsterbehn, F., states that the Ph. Germ. V requires that lime be prepared by calcining white marble or pure limestone. For testing the presence of calcium carbonate and silicate, lime is directed to be dissolved in hydrochloric acid; formerly nitric acid was employed. It is to be preserved in well-closed vessels and in a dry place.—*Apoth.-Ztg.* 1911, v. 26, p. 155.

Murray, B. L., thinks that the U. S. P., in the description of lime, probably includes "masses" only; powdered and granular are evidently not covered.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 13.

LaWall, Charles H., reports an inquiry as to the origin of the lime used by the average druggist. He states that the outcome shows rather a discouraging condition of affairs.—*Proc. New Jersey Pharm. Assoc.* 1911, pp. 93–95.

An unsigned note (*J. Ind. & Eng. Chem.* 1911, v. 3, p. 949) states that the total production of lime in 1910 amounted to 3,469,416 short tons, a slight decrease as compared with the figures for 1909.

The Forty-Seventh Annual Report of the Registrar-General for Ireland states that there was 1 accidental death from lime in 1910.—Chem. & Drug. 1911, v. 79, p. 352.

Fisher, Oskar, in a contribution on the action of disinfectants in filled privy vaults and the longevity of typhoid bacilli in such vaults, reports that milk of lime, from freshly calcined lime, is the best and most economical disinfectant.—Arb. k. Gsmdhtsamte, 1911, v. 38, pp. 198–204. See also under *Liquor calcis*.

CALX CHLORINATA.

Düsterbehn, F., states that the Ph. Germ. V requires that chlorinated lime be preserved in a cool and dry place. Aqueous solutions are to be freshly prepared. The method of assay has also been slightly modified.—Apoth.-Ztg. 1911, v. 26, p. 155.

The Paris Pharmaceutical Society recommends a reduction in the available chlorine requirement of the Codex.—J. Pharm. et Chim. 1911, v. 4, p. 437.

Foerster, F., discusses with illustrations the electrolytic production of hypochlorites, particularly chlorinated lime.—Chem. Ind. 1911, v. 34, pp. 373–378, 402–413.

Ebert and Nussbaum report observations on hypochlorite and electrical bleaching.—Ztschr. ang. Chem. 1911, v. 24, pp. 1137–1138. See also Nussbaum, Josef, *Ibid.* pp. 1958–1959.

Engelhardt, V., discusses the comparative cost of chlorine alkali electrolysis by different methods.—Chem. Ztg. 1911, v. 35, pp. 573–774, 582–584.

Taylor, Robert Llewellyn, reports observations on the action of chlorine on alkalis and of carbon dioxide on bleaching powder.—J. Chem. Soc. Lond. 1911, v. 99, p. 1906–1910.

Askenasy, Paul, discusses the prospects of the chlorine industry.—Chem. Ztg. 1911, v. 35, pp. 609–610.

Bradley, Robert E., discusses a method for the analysis of "bleach" for the available chlorine content.—Chem. Eng. 1911, v. 13, pp. 67–68.

Arny, H. V., reports on 9 samples of chlorinated lime; 4 samples were up to pharmacopœial requirements; the rest ran from 21.0 to 25.6 per cent chlorine.—Proc. Ohio Pharm. Assoc. 1911, p. 126.

Howard, Charles D., reports that but 1 of the 4 samples examined proved to be of standard strength, the other 3 varying from 22 per cent to 81 per cent of the U. S. P. requirement.—New Hampshire San. Bull. 1911, v. 3, No. 14, p. 282.

CALX SULPHURATA.

A contributor to "Notes and Queries" (Drug. Circ. 1911, v. 55, pp. 697–698) outlines a method for preparing sulphurated lime.

Gordon, Frederick T., outlines a method for the valuation of earthy sulphides.—Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 105–106; also Pharm. Era, 1911, v. 44, p. 21.

Smith, Kline & French Co. (Analytical Report, 1911, p. 15) reports that 10 samples of sulphurated lime were found to vary from 35 to 77.7 per cent. See also Proc. Pennsylvania Pharm. Assoc. 1911, p. 120, and Bull. Am. Pharm. Assoc. 1911, v. 6, p. 344.

Strain, Charles S., reports on the use of calcium sulphide in scarlet fever.—Am. J. Clin. Med. 1911, v. 18, pp. 431–432.

Shaller, John M., comments on the use of calcium sulphide in follicular tonsillitis, in acne, in bronchitis, in chronic abscesses of the middle ear, and in the treatment of zymotic diseases.—*Ibid.* pp. 38–39.

CAMBOGIA.

Lloyd, John Uri, states that Chinese travelers over a thousand years ago mentioned cambogia, describing the method of obtaining it by an incision in the stem of the tree.—Bull. Lloyd Libr. 1911, No. 18, p. 13.

Bernegau, L. H., reports that of 3 lots of gamboge examined all slightly exceeded the 75 per cent of alcohol soluble resin. One contained 3.19 per cent of ash, thus slightly exceeding the U. S. P. limit of 3 per cent.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 123.

CAMPHORA.

Lloyd, John Uri, states that camphor has been made in China since the earliest records.—Bull. Lloyd Libr. 1911, No. 18, p. 13.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 581) states that no reference is made to synthetic camphor, which, however, is excluded by the figure now introduced for the specific rotatory power, $+44.22^\circ$ taken in 20 per cent solution in absolute alcohol at 20° . The melting point is now given as 175° to 179° instead of 175° .

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 131) discussing the Ph. Ross. VI requirements for camphor, point out that the specific gravity requirement is superfluous, especially because nothing is said in the pharmacopoeia concerning the method by which this difficult estimation is to be carried out.

An abstract from an article by Robert Kennedy Duncan presents a popular account of the Japanese camphor monopoly.—Montreal Pharm. J. 1911, v. 22, pp. 188–190.

An unsigned article (Sc. Am. Suppl. 1911, v. 71, pp. 251–252), discussing the camphor industry, comments on the Japanese and Formosa methods of producing camphor.

A news note (Oil, Paint, and Drug Reporter, 1911, v. 79, Mar. 15, p. 28L) calls attention to the attempts to revive the camphor industry in China.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, p. 25) present a table showing the exports of camphor from Formosa in the year 1910. More than 40 per cent of this was sent to the United States.

Gehe & Co. (Handelsbericht, 1911, pp. 58-62) review the economic condition of the camphor market, and point out that because of the marked reduction in the price of camphor and the continued high price of oil of turpentine, business in synthetic camphor has waned materially. See also Schimmel & Co. Semi-Annual Report, Apr. 1911, pp. 31-39, and Oct. 1911, p. 27.

Bond, P. A., discusses the camphor industry and the practicability of producing camphor in the U. S.—Chem. Eng. 1911, v. 13, pp. 64-66.

True, R. H., reports that the development of camphor trees in Florida has been slow.—Proc. N. W. D. A. 1911, p. 180.

An unsigned article (Oil, Paint, and Drug Reporter, 1911, v. 80, Dec. 25, p. 23) calls attention to a report by Hood and True on camphor cultivation in the United States.

Galloway, B. T., reports that the camphor work of the Bureau of Plant Industry at Orange City, Fla., has met with a check from the severe frosts of the winter.—Ann. Rep. U. S. Dept. Agric. 1911-12, p. 276.

Reuthe discusses the chemistry and synthesis of the camphors.—Südd. Apoth. Ztg. 1911, v. 51, p. 302.

von Kazay, E., discusses the influence of the water content on the rotatory property of solutions of camphor.—Pharm. Post, 1911, v. 44, pp. 495-496.

Hepburn, Joseph Samuel, reviews some of the recent progress in the chemistry of terpenes and of camphor.—J. Frankl. Inst. 1911, v. 171, pp. 179-203.

Fuller, H. C., discusses the determination of camphor and outlines a method based on Walther's method for the estimation of carvone.—Circ. Bur. Chem. U. S. Dept. Agric. 1911, No. 77, p. 1; also J. Ind. & Eng. Chem. 1911, v. 3, pp. 791-792.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Oct. pp. 107-111) present a review of recent literature on the chemistry of camphor. Also *Ibid.* Apr. pp. 120-123.

The Biennial Report of the inspection of Pharmacies, 1909-10, states that only a few samples of artificial camphor were found.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 229; also J. Pharm. Anvers, 1911, v. 67, p. 517.

Davies, John J., recommends the use of chloroform for powdering camphor in a small way.—Drug. Circ. 1911, v. 55, p. 568.

Lenz, W., discusses the testing of camphor, and states that the melting point is an important factor in determining the purity of camphor.—Arch. Pharm. 1911, v. 249, pp. 286-298.

Gunn, Alex., contributes a note on the loss of camphor from cardboard cartons.—Pharm. J. 1911, v. 87, p. 811.

Malosse, H., comments on the specific rotatory power of camphor dissolved in acetone.—*Compt. rend. Acad. Sc.* 1911, v. 153, p. 56.

North, Horace, discusses factory control of camphorated oil with the aid of the saccharimeter.—*Am. J. Pharm.* 1911, v. 83, pp. 563-564.

Table showing some of the analytical results reported for camphor liniment.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Brown, Lucius P.	18	14	Rep. Tennessee Bd. Health, 1911, p. 129.
Howard, Charles D.	3	3	New Hampshire San. Bull. 1911, v. 3, No. 13, p. 253.
Do Lythgoe, Hermann C.	18 106	11 6	<i>Ibid.</i> No. 14, p. 281. Rep. Massachusetts Bd. Health, 1911, pp. 439, 443.
Street, John Phillips.	23	5	Rep. Connecticut Agric. Exper. Sta. 1911, p. 215. See also <i>Ibid.</i> p. 162.

An editorial (*Am. Druggist*, 1911, v. 59, p. 172) states that optical rotation is to be made use of in the testing of spirit of camphor by the Ph. Brit. The optical rotation of this preparation should be not less than $+4^{\circ}$ at 15° in a 100 mm. tube.

Scheringa, K., discusses the determination of camphor and spirit of camphor according to the method outlined in Ph. Ndl. IV and points out that temperature has a marked influence on the result obtained.—*Pharm. Weekblad*, 1911, v. 48, pp. 375-376.

The Committee of Reference in Pharmacy (Third Report, p. 33) recommends that for spirit of camphor the specific gravity, 0.845 to 0.850, be introduced. The optical rotation in a 100 mm. tube should be not less than $+4^{\circ}$ at 15° . See also *Pharm. J.* 1911, v. 87, p. 812.

Howard, Charles D., reports that serious deficiencies are still being encountered in the strength of this preparation.—*New Hampshire San. Bul.* 1911, v. 3, No. 14, p. 281.

Eaton, H. E., reports that spirit of camphor is frequently of poor quality. In most cases the chemist has found 20 per cent of water and in some cases a much larger per cent.—*Proc. Iowa Pharm. Assoc.* 1911, p. 151.

Diekman, George C., quotes LaWall, who asserts that the normal loss of camphor by evaporation in preparations of camphor is negligible.—*Proc. New York Pharm. Assoc.* 1911, p. 85.

Caspari, Charles, jr., asserts that some of the Maryland druggists are still making spirits of camphor with about 20 or 25 per cent of water added to it.—*Proc. Maryland Pharm. Assoc.* 1911, p. 99.

Cook, Alfred N., states that some of the spirit of camphor examined impresses one that the proportions had been guessed at in making it up.—*Bull. South Dakota Food & Drug Dept.* 1911, No. 23, p. 2.

Table showing some of the analytical results reported for spirit of camphor.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Brown, L. A.	2	2	Bull. Kentucky Agric. Exper. Sta. 1911, Oct. pp. 25-33.
Caspari, Charles, jr.	174	93	Proc. Maryland Pharm. Assoc. 1911, p. 101.
Coblents, Virgil.	5	2	J. Ind. & Eng. Chem. 1911, v. 3, p. 540.
Dunlap, Renick W.	17	11	Rep. Ohio Dairy & Food Com. 1910-11, p. 47.
Halverson, J. O.	34	21	Ann. Rep. Food & Drug Com. Missouri, 1911, p. 14.
Do.	4	4	Bull. Dept. Food & Drug Inspec. Missouri, 1911, p. 3.
Howard, Charles D.	18	11	New Hampshire San. Bull. 1911, v. 3, No. 14, p. 281.
Lythgoe, Hermann C.	54	4	Rep. Massachusetts Bd. Health, 1911, pp. 441, 442.
Massachusetts Bd. Health.	4	4	Monthly Bulletin, 1911, pp. 11, 328.
Porter, C. S.	67	51	Am. Druggist, 1911, v. 59, p. 42.
Rose, R. E.	14	13	Bull. Florida Agric. Dept. 1911, v. 21, pp. 124-125.
Sayre, L. E.	7	2	Bull. Kansas Bd. Health, 1911, v. 7, p. 215.
Street, John Phillips.	69	54	Rep. Connecticut Agric. Exper. Sta. for 1910-11, p. 581. See also pp. 560-562.

Lippens, Adrien, presents a comprehensive report on the action of camphor and of its derivatives on the heart, both normal and poisoned with hydrated chloral.—Arch. internat. pharmacod. et therap. 1911, v. 21, pp. 119-161.

Weber, Leonard, reports on the use of camphor in large doses in pneumonia, in the form of a 20 per cent solution of camphor in oil of sweet almonds injected hypodermically at the rate of two syringefuls every hour until 8 had been given each day.—Med. Rec. 1911, v. 79, pp. 145-146.

An editorial (Therap. Gaz. 1911, v. 35, pp. 406-407) discusses the use of camphor as a diffusible stimulant.

An editorial (Brit. M. J. 1911, v. 2, p. 764) calls attention to Krecke's recommendation of oil of camphor in the treatment of purulent peritonitis.

Merck, E. (Ann. Rep. 1911, v. 25, pp. 185-188), reviews the recent literature on the therapy of camphor.

Additional references on the chemistry, pharmacology, and therapeutic uses of camphor will be found in Index Med.; J. Am. M. Assoc.; Chem. Abstr.; Exper. Sta. Rec.; Zentralbl. Biochem. u. Biophysik; and Chem. Centralbl.

CANNABIS INDICA.

Lloyd, John Uri, states that cannabis indica is one of the oriental products the beginning of whose use is lost in antiquity.—Bull. Lloyd Libr. 1911, No. 18, p. 13.

True, R. H., reports that cannabis grows very well in the soil of Maryland and in various other parts of the United States. A small crop of cannabis grown from seed in the experimental ground at Washington proved to be excellent.—*Proc. N. W. D. A.* 1911, p. 167.

Rosenthaler, L., discusses the preparation of the drug cannabis in Greece and describes and illustrates the method of cultivating it.—*J. Pharm. Elsass-Loth.* 1911, v. 38, pp. 232-234. See also *Apoth.-Ztg.* 1911, v. 26, p. 678.

Bruck, Werner Friedrich, reports a study of the cultivation of hemp in Italy.—*Tropenpflanzer*, 1911, v. 15, pp. 129-141, 187-202, 244-264.

Lupton, Stuart K., reports that the Government of India has prohibited the importation of ganja, bhang, and charas, and every intoxicating drink or substance prepared from any part of the hemp plant.—*Cons. & Tr. Rep.*, Apr. 7, 1911, p. 92. See also *Pharm. J.* 1911, v. 86, p. 361.

Caesar & Loretz (*Jahres-Bericht*, 1911, p. 41) point out that because of the high export tax true Indian cannabis is being held at inordinately high figures. Substitute varieties are being more extensively used.

The Committee of Reference in Pharmacy (Third Report, Suppl., p. 2) does not consider the substitution of churrus for the herb to be advisable, on account of the difficulty in determining the identity and purity of the drug. See also *Pharm. J.* 1911, v. 87, p. 495.

Rusby, H. H., suggests that an admixture of 5 per cent of seeds should not be condemned.—*Pharm. Era*, 1911, v. 44, p. 95. See also p. 141.

Wood, H. C., jr., states that until some more satisfactory means of standardizing cannabis indica has been suggested the committee of the Philadelphia Branch of the American Pharmaceutical Association feels that no physiologic assay process for this drug should be introduced into the Pharmacopœia.—*J. Am. M. Assoc.* 1911, v. 56, p. 606; also *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 22.

Houghton, E. H., states that experiments show quite conclusively that dogs respond to the influence of the drug in the most constant and characteristic way. He outlines the method of assay adopted by him and expresses himself as being satisfied that with selected dogs and a trained observer one can draw reasonably accurate conclusions as to the value of any preparation of cannabis sativa.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, pp. 178-179.

Smith, Kline & French Co. (Analytical Report, 1911, p. 46) reports on the physiological testing of cannabis indica.

Hamilton, H. C., proposes the following requirements for cannabis indica: That the yield of solid extract be not less than 9 per cent, and that this solid extract be entirely soluble in cold alcohol; 0.1 gm.

of this extract should produce the typical effect of the drug on a 10 kilo dog. The dog should be one which reacts to this drug, and the effect noted is that of incoordination in its movements.—Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 27-28.

Deane, Harold, reports a number of experiments to determine the proportion of extract and of resin yielded by Indian hemp. He also reports the examination of a number of commercial samples of Indian hemp.—Year-Book of Pharmacy, 1911, pp. 402-406; also Chem. & Drug. 1911, v. 79, pp. 207, 560; Pharm. J. 1911, v. 87, pp. 160-161; also p. 568 for adverse criticism by T. F. Abraham.

Marshall and Wigner present a report on the standardization of preparations of Indian hemp with special reference to the value of the "iodine number."—Brit. M. J. 1911, v. 1, p. 1171. See also Chem. & Drug. 1911, v. 78, p. 854.

Smith, Kline & French Co. (Analytical Report, 1911, p. 15) reports that it has been found impossible to obtain this drug without some developed seeds.

Vanderkleed, Chas. E., reports 10 assays of *cannabis indica*; lowest 11.628 per cent, highest 14.280 per cent, resin; all above standard.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

Smith, Kline & French Co. (Analytical Report, 1911, p. 43) reports that a sample of tincture of *cannabis indica* was found practically worthless.

Leming, W., enumerates *cannabis indica* among the remedies useful in acute cystitis.—Nat. Eclect. M. Assoc. Quart. 1910-11, v. 2, p. 209.

Copeland, R. S., states that *cannabis sativa* in the 6x dilution will, in some cases, cause the disappearance of corneal opacities due to scar tissue.—Hahnemann. Month. 1911, v. 46, p. 78.

CANTHARIS.

Lloyd, John Uri, states that Spanish cantharides, once a popular remedy, has lost its position in modern medication. Its use came hand in hand with mediæval medical cruelty and was an heirloom of ancient heroic medication.—Bull. Lloyd Libr. 1911, No. 18, p. 14.

Netolitzky, F., describes, with illustrations, the microscopy of *Lytta vesicatoria* L.—Ztschr. allg. österr. Apoth.-Ver. 1911, v. 49, pp. 219-221.

Beringer, George M., notes that the Ph. Germ. V requires that cantharides contain 0.8 per cent of cantharidin. The assay process has been improved by recrystallizing the product from acetone, but it still does not yield a colorless and pure product.—Proc. New Jersey Pharm. Assoc. 1911, p. 80. See also Pharm. J. 1911, v. 86, p. 708.

E'We, Geo. E., thinks that a cantharidin standard should be adopted. Five samples ranged from 0.342 to 0.564 per cent, as

determined by the method of the Ph. Germ.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 120.

Dohme and Engelhardt believe that cantharides and its preparations should be assayed. Several reliable methods have recently been published.—Am. J. Pharm. 1911, v. 83, p. 520.

Diekman, George C., suggests that cantharides be accompanied by an assay process and the per cent of the active principle be fixed within reasonable limits.—Proc. New York Pharm. Assoc. 1911, p. 86.

Bernard, Maurice, presents a contribution on cantharidin in which he reviews some of the literature on the chemistry of the substance and concludes that the several reactions described in the literature are practically valueless; the only reliable test for cantharides or cantharidin is its physiological action.—J. Pharm. Elsass-Lothr. 1911, v. 38, pp. 144–146. See also D.-A. Apoth.-Ztg. 1911–12, v. 32, p. 58.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 88–90) discuss the testing and assay of cantharides and present a table showing the limitations for ash and the cantharidin content requirements included in the several pharmacopœias.

Kneip, Ney, and Reimers discuss the quantitative estimation of cantharidin in cantharides and tincture of cantharides. They also report determinations on the ash content and water content of cantharides. The ash content was found to vary from 5.54 to 6.99 per cent and the moisture content from 7.54 to 11.32 per cent.—Arch. Pharm. 1911, v. 249, pp. 259–285.

Gaze, R., outlines a method for the estimation of cantharidin in tincture of cantharides and in oil of cantharides.—Pharm. Zentralh. 1911, v. 52, p. 1035. See also Apoth.-Ztg. 1911, v. 26, pp. 332–333.

Kneip, Alex., in German patent 233,467, outlines a method for the production of cantharidin from cantharides and other cantharidin-containing drugs.—Chem. Repert, 1911, v. 35, p. 261.

Rosenthaler, L., describes and illustrates the nature of the material obtained from cantharides by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, p. 533.

Schneider, Albert, reports on 2 samples of cantharides, both of which were adulterated.—Pacific Pharm. 1911, v. 5, p. 178.

The Biennial Report of the Inspection of Pharmacies, 1909–10, calls attention to the lack of care in preserving cantharides and states that it is desirable to keep this product in drying flasks and free from acarids and putrefactive agents.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 229. J. Pharm. Anvers, 1911, v. 67, p. 517.

Gehe & Co. (Handelsbericht, 1911, p. 62) note that the consumption of cantharides is being reduced very rapidly, so that despite the practical failure of the crop, it has not materially affected the price of the drug.

Eberhardt, E. G., reports some experiments in the preparation of tincture of cantharides.—Am. J. Pharm. 1911, v. 83, pp. 471–474.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that cantharidal plaster rarely conforms to the pharmacopœia.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 239; also J. Pharm. Anvers, 1911, v. 67, p. 563.

Diekman, George C., reports an improved formula for cantharidal collodion in which a mixture of acetone and glacial acetic acid is used as a solvent. He also points out that petrolatum is a poor solvent for the active principle of cantharides.—Proc. New York Pharm. Assoc. 1911, p. 86.

Royal, George, gives cantharis for acute nephritis with scanty, bloody, albuminous urine, or for renal calculi with hæmaturia with hot, scanty urine.—Hahnemann. Month. 1911, v. 46, p. 556.

Jones, Eli G., states that the indication for cantharides is constant urging to urinate.—J. Therap. & Diet. 1911, v. 5, p. 305.

CAPSICUM.

Lloyd, John Uri, notes that at the time of the discovery of America capsicum was used by everyone as an important pepper in preparing food. It has long been an important domestic medicine and occupies a prominent place in the Thomsonian school.—Bull. Lloyd Libr. 1911, No. 18, p. 14.

True, R. H., reports on the growing of a variety of red peppers in South Carolina. He suggests the official recognition of *Capsicum annum* as the source of capsicum.—Proc. N. W. D. A. 1911, p. 175.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 653) points out that an ash limit of 6.5 per cent is introduced for the powder.

Sindall, Harry E., reports some observations on the ash content of capsicum and presents a number of results to show the impracticability of adhering to the limits outlined in circular No. 19.—J. Ind. & Eng. Chem. 1911, v. 3, pp. 753-754.

Vanderkleed, Chas. E., reports 2 assays of capsicum: Lowest 17.400 per cent, highest 17.930 per cent oleoresin; all above standard.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

Scoville, Wilbur L., thinks that the physiological test for capsicum is infinitely more delicate and reliable than the similar test proposed for use in connection with aconite.—Am. J. Pharm. 1911, v. 83, p. 440. See also Bull. Pharm. 1911, v. 25, p. 370.

Jaffa, M. E., reports a sample of cayenne pepper which contained an unduly large amount of sand.—Bull. California Bd. Health, 1911, v. 7, p. 164.

Schneider, Albert, reports on 28 samples of cayenne, 5 of which, or 17.8 per cent, were found to be adulterated with corn meal, wheat, and salt.—Pacific Pharm. 1911, v. 5, p. 177.

Notice of Judgment No. 1013, under the food and drugs act, deals with the adulteration and misbranding of cayenne pepper.

Deane, Harold, criticizes *oleoresina capsici* Ph. Brit. He thinks the preparation has no right to the name "*oleoresin*."—Pharm. J. 1911, v. 87, p. 804.

The Committee of Reference in Pharmacy (Third Report, Suppl., p. 3) recommends that tincture of capsicum be made with 60 per cent alcohol. See also Pharm. J. 1911, v. 87, p. 847.

Bullock, Lillian J., states that in the fruit of *capsicum fastigiatum* we have "a pure, energetic, permanent stimulant" and that it is an absolutely safe stimulant, one which will not lead to drug habit.—Nat. Eclect. M. Assoc. Quart. 1910–11, v. 2, pp. 296–297; also Ellingwood's Therap. 1911, v. 5, pp. 423–424.

An editorial (Eclectic Med. Glean. 1911, v. 7, pp. 536–537) states that capsicum is unquestionably one of the purest and safest diffusible stimulants.

CARBO ANIMALIS.

Murray, B. L., states that purified animal charcoal is a decolorizing agent and, as described by the U. S. P., a very ordinary one. An article of much higher decolorizing value can not be called by the official name.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 17.

Plaut, Albert, thinks that animal charcoal will probably be left out of the U. S. P.—Pharm. Era, 1911, v. 44, p. 12.

Weinstein, Joseph, objects to the deletion of animal charcoal, as it is called for every day in the dispensing of prescriptions in New York City.—*Ibid.* p. 12.

CARBO LIGNI.

Caesar & Loretz (Jahres-Bericht, 1911, p. 16) suggests that powdered wood charcoal should leave less than 5 per cent of ash and should burn without the development of smoke or flame.

Amos, W. S., reports powdered charcoal giving a dark brown filtrate and other evidence of incomplete carbonization.—Proc. Missouri Pharm. Assoc. 1911, p. 98.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 9) report that one of the five samples of charcoal examined contained a proportion of mineral matter in excess of the not too stringent official maximum of 7.5 per cent. The figures varied from 2.78 to 11.21 per cent.

Roush, G. A., discusses the microscopic examination and identification of carbon and describes and illustrates the microscopical appearance of various forms of carbon, including lampblack, retort carbon, petroleum coke, graphite, and coal coke.—J. Ind. & Eng. Chem. 1911, v. 3, pp. 368–372.

CARBON DIOXIDE.

Hildebrand, F. (Eng. Pat. 19,336, Aug. 17, 1910), describes a process of and apparatus for liquefying carbonic acid.—J. Soc. Chem. Ind. 1911, v. 30, p. 803.

Minor, John C., jr., discusses, with illustrations, the manufacture and testing of carbonic acid cylinders.—*Tr. Am. Inst. Chem. Eng.* 1911, v. 4, 1912, pp. 195–217.

Hall, L. B. (*Eng. Pat.* 10,378, Apr. 28, 1910), describes an apparatus for the manufacture and manipulation of solid carbon dioxide.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 542.

Bunnell, Sterling H., presents observations on a problem in saving heat in the manufacture of carbon dioxide.—*Chem. Eng.* 1911, v. 13, pp. 155–157.

Purmann and Verbeek describe and illustrate a practical laboratory apparatus for the production of carbon dioxide.—*Chem. Ztg.* 1911, v. 35, pp. 927–928.

Sander, Wilhelm, reports observations on the solubility of carbon dioxide in water and other solvents under pressure.—*Ztschr. physik. Chem.* 1911–1912, v. 78, pp. 513–549.

Skórczewski, W., reports observations on the action of carbon dioxide baths on the circulation of the blood and the action of the heart.—*Ztschr. exper. Path. u. Therap.* 1911, v. 9, pp. 49–86.

An editorial (*Chem. & Drug.* 1911, v. 79, p. 818) calls attention to a contribution by C. J. S. Thompson to the history of carbon dioxide anæsthesia.

Hernaman-Johnson, Francis, contributes a brief note on the use of carbon dioxide snow as a skin anæsthetic. He advocates its use as preliminary to the administration of a hypodermic injection.—*Lancet*, 1911, v. 181, p. 137.

Pisko, Edward, contributes a note on the treatment of skin diseases with solid carbon dioxide snow.—*N. York M. J.* 1911, v. 93, pp. 215–217. See also paper by Frescoln, pp. 828–830.

Harston, G. Montagu, reports on 50 cases of trachoma treated with carbon dioxide snow.—*Brit. M. J.* 1911, v. 2, p. 107.

A book review (*Fol. Therap.* 1911, v. 5, pp. 90–91) calls attention to a volume by R. Cranston Low on "Carbonic Acid Snow, as a Therapeutic Agent in the Treatment of Diseases of the Skin."

Ewart, William, describes a simple method for the therapeutic inhalation of carbonic acid gas.—*Brit. M. J.* 1911, v. 2, pp. 805–807.

Merck, E. (*Ann. Rep.* 1911, v. 25, p. 190), summarizes recent contributions on the treatment of diseases of the skin with carbonic acid.

CARBONEI DISULPHIDUM.

The *Pharmaceutical Journal* (1911, v. 87, p. 831) reports the death, at the Royal Infirmary, of a shoemaker who had swallowed a quantity of carbon bisulphide by mistake.

de Kruyff, Chief of the Bureau of Agriculture in the Dutch Indies, recommends carbon disulphide for the destruction of rats. Five

hundred gm. will suffice for more than 200 holes. In one test they found 131 dead rats in 43 holes which were opened after the operation.—*J. Pharm. et Chim.* 1911, v. 4, p. XXXX.

CARDAMOMUM.

Lloyd, John Uri, states that cardamom has been used in India from a remote period.—*Bull. Lloyd Libr.* 1911, No. 18, p. 15.

Hartwich, C., in a review of the *Ph. Germ.* V points out that the description of cardamom is not in accordance with his observations and that anatomical details are missing.—*Apoth.-Ztg.* 1911, v. 26, p. 21.

Rusby, H. H., asserts that acceptable cardamom should contain not less than 70 or 75 parts of seed to 25 or 30 parts of pericarp or hull. Actual separation and estimation are necessary.—*Pharm. Era*, 1911, v. 44, p. 95.

Heinrich Haensel (*Bericht*, Oct.-Apr., 1910-11, p. 12) reports that the cultivation of cardamom is being discontinued, both on the Malabar coast as well as on the Island of Ceylon, in favor of cinchona and rubber plantations.

Gehe & Co. (*Handelsbericht*, 1911, p. 78) present a table showing the London statistics for cardamum for the years 1907 to 1910, inclusive.

A news note (*Chem. & Drug.* 1911, v. 78, p. 489) states that the total shipment of Ceylon cardamoms for 1910 was 639,007 pounds as against 824,008 pounds in 1909. See also *J. Soc. Chem. Ind.* 1911, v. 30, p. 452.

An editorial (*Brit. & Col. Drug.* 1911, v. 60, p. 466) discusses the cardamom market, and points out that the Ceylon exports to the United States in 1909 amounted to 55,006 pounds, in 1910 to 26,449 pounds, and in 1911 to 56,964 pounds. See also *Cons. & Tr. Rep.* Aug. 12, 1911, p. 675.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 3) recommends that compound tincture of cardamom be made with 45 per cent of alcohol, and the raisins omitted. To the product obtained by the maceration process, 10 per cent of glycerin should be added. See also *Pharm. J.* 1911, v. 87, p. 847.

Whorton, C., can not refrain from asking the retail druggist never to make the tincture cardamom compound from fluid extracts, but always from U. S. P. by addition of raisins.—*Proc. Alabama Pharm. Assoc.* 1911, p. 97.

CARUM.

Lloyd, John Uri, states that caraway was known to the Arabians, and at an early date was introduced into England.—*Bull. Lloyd Libr.* 1911, No. 18, p. 15.

Tunmann, O., in commenting on the drug trade of Hamburg discusses the origin of caraway seed, and presents a table showing the imports and exports of this drug from 1897 to 1908.—*Apoth.-Ztg.* 1911, v. 26, pp. 377-378.

Rusby, H. H., states that caraway is extremely liable to contamination with large amounts of stems, gravel, sand, dust, weed seeds, and other impurities.—*Oil, Paint, and Drug Reporter*, 1911, v. 80, Nov. 20, p. 28K.

An unsigned review of the *Ph. Germ. V* (*Pharm. J.* 1911, v. 86, p. 653) points out that an ash limit of 8 per cent is introduced for the powder.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, p. 29) state that caraway is the only important raw product of their industry which has not suffered from the abnormal conditions of the weather during the year.

van der Wielen, P., discusses the cultivation of caraway in Holland, and presents tables showing the amount produced during the years 1871 to 1911; also a number of illustrations showing the plantations and methods of harvesting the crop.—*Pharm. Weekblad*, 1911, v. 48, pp. 988-996. See also *Pharm. J.* 1911, v. 87, p. 817; and Schimmel & Co. Semi-Annual Rep. Apr. 1911, p. 40.

Umney and Bennett report that 6 samples of caraway yielded from 6.1 to 20.7 per cent of ash and from 16.6 to 23 per cent of ether extract. Fair samples of caraway yielded only 5 to 7 per cent of ash.—*Drug Topics*, 1911, v. 26, p. 148; also *Pharm. J.* 1911, v. 86, p. 596, and *Chem. & Drug*, 1911, v. 78, p. 674.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 9) report that 3 samples of powdered caraway seed yielded from 6.39 to 7.67 per cent of ash.

CARYOPHYLLUS.

Lloyd, John Uri, states that cloves have been an article of Indian commerce since an early date.—*Bull. Lloyd Libr.* 1911, No. 18, p. 15.

Murray, B. L., states that the *Pharmacopœia* in its definition uses the official title "cloves" as though referring to the entire, whole flower buds, in which case the powdered buds could not consistently be called by the official name of "cloves."—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 12.

Gehe & Co. (*Handelsbericht*, 1911, pp. 62-64) review the market for cloves and present a table showing the production in Zanzibar and in Pemba, 1900 to 1910, inclusive. See also Schimmel & Co., Semi-Annual Rep. Oct. 1911, p. 38; and *Cons. & Tr. Rep.* Sept. 8, 1911, p. 1101.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for caryophyllus: Water content, 12.56

per cent; ash content, 8.74 per cent; alkalinity of water soluble ash, 1.75 per cent; total alkalinity of ash, 5.49 per cent.—Proc. Ohio Pharm. Assoc. 1911, p. 70.

Wiley, H. W., reports powdered cloves adulterated with clove stalks.—Ann. Rep. U. S. Dept. Agric. 1911-12, p. 424.

Schneider, Albert, reports on 18 samples of cloves, 13 of which, or 72.2 per cent, were adulterated with clove stems, wheat, beans, and allspice.—Pacific Pharm. 1911, v. 5, p. 177.

Rusby, H. H., thinks that cloves should be permitted to contain 5 per cent of stalks.—Pharm. Era, 1911, v. 44, p. 95.

"D. B." reports that, according to W. Mitlacher, the Austrian inspection of pharmacies found that powdered cloves in particular are adulterated by the addition of pulverized peduncles. As these contain numerous stone cells, their presence may be easily recognized.—Bull. sc. pharmacol. 1911, v. 18, Annexes, p. 9.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 22) report on 1 sample of cloves which contained only 15 per cent of oil and 13.9 per cent of water; the average oil yield being 18 per cent, with about 10 per cent moisture.

Hoffmann and Evans, in a report of observations on the use of spices as preservatives, point out that it requires considerably higher proportions of eugenol than of cinnamic aldehyde for complete preservation.—J. Ind. & Eng. Chem. 1911, v. 3, pp. 835-838.

CASSIA FISTULA.

Lloyd, John Uri, states that cassia fistula was described by Joannes Actuarius, of Constantinople, during the Thirteenth Century.—Bull. Lloyd Libr. 1911, No. 18, pp. 15-16.

Tunmann, O., in commenting on the drug trade of Hamburg, points out that cassia fistula comes almost entirely from Dutch India, usually by way of Holland.—Apoth.-Ztg. 1911, v. 26, p. 377.

Griebel, C., reports observations on the composition of the pulp of *Cassia fistula* L. He found saccharose, invert sugar, citric acid, tannin containing substances, a yellow coloring matter, pectin, and a brown coloring matter.—Ztschr. Unters. Nahr. u. Genussm. 1911, v. 21, 283-288.

CATAPLASMA KAOLINI.

Mackay and Cowley think that the important feature in the making of cataplasma kaolini is the securing of a perfectly anhydrous preparation.—Chem. & Drug. Australas. 1911, v. 26, p. 188.

Bissell, W. B., suggests adding 10 per cent more glycerin to the U. S. P. formula for cataplasma kaolini.—Proc. New York Pharm. Assoc. 1911, p. 91.

CERA ALBA.

Linke, H., discusses the Ph. Germ. V requirement for white and yellow wax, criticizes the method of determining the specific gravity, and commends the slight increase in the melting point requirement that has been included.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 184–187. See also Pharm. J. 1911, v. 86, p. 653, and Chem. & Drug. 1911, v. 78, p. 230.

The Committee of Reference in Pharmacy (Third Report, p. 4) suggests a monograph for *cera alba* including a test for the limits of free acids; in other respects the requirements for yellow beeswax are to be complied with. See also Pharm. J. 1911, v. 87, p. 496.

Wagenaar, M., discusses the reactions for foreign fats in wax, paraffin, spermaceti, and wool fat.—Pharm. Weekblad, 1911, v. 48, pp. 479–481.

Wild, R. B., gives the melting point of white beeswax as 62°.—Brit. M. J. 1911, v. 2, p. 161.

Sayre, L. E., found 2 samples of white wax to be adulterated with paraffin.—Bull. Kansas Bd. Health, 1911, v. 7, p. 174.

Smith, Kline & French Co. (Analytical Report, 1911, p. 16) reports that 2 of the 7 samples of white wax examined were rejected on account of their color.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 7) report on 12 samples of white beeswax—11 gave normal results, specific gravity, 0.957 to 0.965; melting point, 62° to 64°; acid value, 21.06 to 24.07; saponification value, 98.18 to 102.70; while the remaining sample proved, according to Weinwurm's test, to contain a considerable proportion of paraffin.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, states that both yellow and white wax are still found adulterated with ozokerite and with paraffin, which resist saponification.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 229. Also J. Pharm. Anvers, 1911, v. 67, p. 517.

CERA FLAVA.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 230) states that yellow wax is required to be prepared from honeycombs made by the honey bee; artificial honeycombs made of ceresin may not be employed. See also Pharm. J. 1911, v. 86.

Bohrisch and Kürschner discuss the Ph. Germ. V monograph for yellow wax and assert that the requirements for acid and for ester number are not above reproach.—Pharm. Ztg. 1911, v. 56, pp. 115–116.

Dichgans, H., points out that the Ph. Germ. V method for ester number gives values that are altogether too low.—Pharm. Ztg. 1911, v. 56, p. 149.

The Committee of Reference in Pharmacy (Third Report, p. 5) suggests certain corrections in the monograph proposed in the report of 1908; adds a test for the absence of stearic acid; gives the refractive index at 80° as 1.4380 to 1.4420; and suggests that after the words "*Apis mellifica* L." the words "and possibly other species" should be inserted. See also Pharm. J. 1911, v. 87, p. 496.

The Daily Consular and Trade Reports (May 18, 1911, p. 744) quotes from the Bureau of Statistics imports of beeswax into the United States during the fiscal years ending June 30, 1909 and 1910, amounting to 764,937 and 972,145 pounds, respectively.

Küstenmacher, M., presents a comprehensive discussion on the nature and origin of propolis and its relation to wax; also calls attention to some of the available literature on the subject.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 65–92. See also article by Dieterich, Pharm. Zentralh. 1911, v. 52, pp. 1019–1027; and Pharm. Post, 1911, v. 44, p. 794.

Malfatti, H., reports the examination of a number of very old samples of wax.—Ztschr. anal. Chem. 1911, v. 50, pp. 693–694.

Wild, R. B., gives the melting point of yellow beeswax as 60.5°.—Brit. M. J. 1911, v. 2, p. 161.

Richter, Ernst, discusses the estimation of the specific gravity of wax.—Apoth.-Ztg. 1911, v. 56, pp. 187–188.

Fromme, G., discussing the determination of the specific gravity of wax, describes the making of pellets of wax by dropping melted wax from a glass tube into alcohol, the upper layer of which has been slightly warmed.—Pharm. Ztg. 1911, v. 56, p. 403; and Apoth.-Ztg. 1911, v. 26, p. 402.

Wichmann, Alexis, outlines a simplified method for determining the acid and saponification number of wax.—Pharm. Zentralh. 1911, v. 52, p. 363. See also Apoth.-Ztg. 1911, v. 26, p. 311, and pp. 1057–1058.

Berger comments on a simplified procedure for determining the acid number and saponification value of wax.—Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, p. 433.

Klein, Fred, presents a method for the rapid determination of beeswax.—Pract. Drug. 1911, v. 29, Oct., p. 37.

Bucl aer, Georg, presents a contribution on the analysis of commercial wax, particularly the East Indian and Chinese variety.—Ztschr. öffentl. Chem. 1911, v. 17, pp. 225–227.

Feldstein, L., reports a study on the refractive index of beeswax, and points out that the determination of the refractive index is of great help in detecting gross adulteration and will generally reveal small adulterations.—Circ. Bur. Chem. U. S. Dept. Agric. No. 86, p. 3.

Sayre, L. E., reports that the specific gravity of 4 samples of beeswax examined by him varied from 0.961 to 0.968, the saponification

value from 89.2 to 102.1, and the melting point from 63 to 63.5°.—Bull. Kansas Bd. Health, 1911, v. 7, p. 215.

Smith, Kline & French Co. (Analytical Report, 1911, p. 16) reports on 18 samples of yellow wax. Fourteen samples were of U. S. P. quality, 3 were dark in color, and one was adulterated. See also Proc. Pennsylvania Pharm. Assoc. 1911, p. 131; and Bull. Am. Pharm. Assoc. 1911, v. 6, p. 344.

Sayre, L. E., reports on 5 samples of yellow wax. Three were found to be adulterated.—Bull. Kansas Bd. Health, 1911, v. 7, p. 174.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 13) report on 54 samples of yellow beeswax, and on 7 adulterated samples. The adulterations found were tallow, resin, ceresin, and stearin.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 8) report on 10 samples of yellow beeswax, in one of which paraffin was detected.

CERATA.

The Cleveland Branch of the A. Ph. A. adopted, with but one negative vote, the suggestion to drop the class of cerates, incorporating the idea as a footnote under ointments.—Pharm. Era, 1911, v. 44, p. 113.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 708) points out that cerata is a new class of preparations. They are poured into moulds, are solid at the ordinary temperature, and become fluid on gently warming.

CERII OXALAS.

Whitney, D. V., reports a sample of cerium oxalate marked pure which contained lead.—Proc. Missouri Pharm. Assoc. 1911, p. 96.

CETACEUM.

The Committee of Reference in Pharmacy (Third Report, p. 5) suggests a new monograph for cetaceum, to be substituted for the one at present official as well as for that suggested in its report for 1908. The melting point is reduced, certain constants are introduced, and the test for stearic acid is made rather more precise. See also Pharm. J. 1911, v. 87, p. 496.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 230) points out that spermaceti is required to have a specific gravity of 0.940 to 0.945; melting point, 45° to 54°. See also Pharm. J. 1911, v. 86, p. 653.

Wild, R. B., gives the melting point of spermaceti as 48.5°.—Brit. M. J. 1911, v. 2, p. 161.

Wagenaar, M., discusses the reactions for foreign fats in wax, paraffin, spermaceti, and wool fat.—Pharm. Weekblad, 1911, v. 48, pp. 479-481.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 66) report the examination of 38 samples of spermaceti, 3 of which were found to be inferior and insufficiently refined rather than adulterated.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 20) report that they have examined a considerable number of samples of spermaceti during the past year, and after rejecting those which were unsuitable for pharmaceutical use, owing to color, etc., obtained the following results for the remaining 10 samples: melting point, 44° to 46°; saponification value, 122.5 to 128.6.

CHIMAPHILA.

Lloyd, John Uri, states that the Indians of North America considered chimaphila of importance, using decoctions of it in nephritic, scrofulous, and rheumatic disorders.—Bull. Lloyd Libr. 1911, No. 18, p. 16.

Henkel, Alice, describes and illustrates pipsissewa, *Chimaphila umbellata* (L.) Nutt., also gives synonyms, other common names, the habitat and range, and data on the collection, prices, and uses.—Bull. Bur. Plant Ind. U. S. Dept. Agric. 1911, No. 219, p. 16.

Rabe, R. P., states that chimaphila is indicated in cases of thick urine, ropy; sensation of ball in perineum.—Hahnemann. Month. 1911, v. 46, p. 399.

CHIRATA.

Lloyd, John Uri, notes that chirata has long been held in esteem by the Hindoos, though it did not attract attention in England until 1829, being introduced into the Edinburgh Pharmacopœia in 1839.—Bull. Lloyd Libr. 1911, No. 18, p. 16.

CHLORALFORMAMIDUM.

Düsterbehn, F., states that the Ph. Germ. V gives the solubility of chloralformamide as 1:30 water, and 1:2.5 in alcohol.—Apoth.-Ztg. 1911, v. 26, p. 166. See also Pharm. J. 1911, v. 86, p. 581.

CHLORALUM HYDRATUM.

Lloyd, Gordon, states that chloral was prepared by Liebig in 1834, but was not used as a medicine till Liebreich introduced it as a hypnotic in 1869.—Rocky Mountain Druggist, 1911, v. 25, Mar. p. 43.

Düsterbehn, F., points out that the Ph. Germ. V requires that chloral hydrate melt at from 49° to 53°, and that a solution of 1 gm. of chloral hydrate in 5 cc. of water should not develop the odor of benzol on being warmed.—Apoth.-Ztg. 1911, v. 26, p. 166. See also Pharm. J. 1911, v. 86, p. 581.

The Paris Pharmaceutical Society suggests a modification in the Codex statement, to the effect that the aqueous solution is neutral at first, but gradually becomes acid.—J. Pharm. et Chim. 1911, v. 4, p. 437.

Bourdet, L., contributes a short note on the assay of chloral, urging the necessity of employing distilled water, recently freed from carbonic acid gas and re-cooled.—*J. Pharm. et Chim.* 1911, v. 4, p. 18.

McEwan, Donald, calls attention to an incompatible chloral mixture containing chloral and magnesia from which chloroform had resulted.—*Brit. & Col. Drug.* 1911, v. 59, p. 153.

An editorial note (*Chem. & Drug.* 1911, v. 78, p. 289) quotes the report of the Registrar-General to the effect that in 1908 there were 6 poisonings from chloral, by negligence or accident, and 1 suicide, as compared with 1 and 1, respectively, for 1909.

Wallace, George B., in discussing chronic chloral poisoning, points out that the earlier doses of chloral produce vomiting, but later the stomach becomes tolerant to the drug and vomiting does not occur.—*J. Pharmacol. & Exper. Therap.* 1911-12, v. 3, pp. 462-463.

An editorial (*Critic and Guide*, 1911, v. 14, p. 110) states that the withdrawal of chloral is attended by great dangers, referable to the heart. Withdrawal must be carried out very slowly. The substitution of some other narcotic, such as trional, sulphonal, or morphine, must, if possible, be avoided.

Murphy, W. J., discusses the therapeutic uses of hydrated chloral, and presents a brief digest of authoritative opinion.—*Am. Med.* 1911, v. 17, pp. 604-611.

Ranson and Scott, discussing the results of medicinal treatment in 1,106 cases of delirium tremens, state that, on the whole, the effect of chloral on the delirious patients was unfavorable.—*Am. J. M. Sc.* 1911, v. 141, pp. 673-687.

Rabe, R. P., states that chloral hydrate is indicated in cases of erythema, like scarlet fever.—*Hahnemann. Month.* 1911, v. 46, p. 399.

CHLOROFORMUM.

Lloyd, Gordon, states that chloroform was discovered independently by [Guthrie] Souberan and Liebig in 1831, but it remained for James Y. Simpson to discover its anæsthetic use in 1847, for which service a grateful government made him "Sir James."—*Rocky Mountain Druggist*, 1911, v. 25, Mar. p. 43.

Düsterbehn, F., notes that the Ph. Germ. V now requires the presence of from 0.6 to 1 per cent of absolute alcohol in chloroform.—*Apoth.-Ztg.* 1911, v. 26, p. 166. See also *Pharm. J.* 1911, v. 86, p. 581; and *Chem. & Drug.* 1911, v. 78, p. 13.

The Section on Anæsthesia of the Royal Society of Medicine, after discussion, resolved that methyl chloroform was sufficiently important to be included in the British Pharmacopœia and that acetone chloroform should also be included.—*Lancet*, 1911, v. 181, p. 1701.

An editorial (*Chem. & Drug.* 1911, v. 79, p. 953), commenting on the discussion as to the admission of methyl and acetone chloroform

into the Ph. Brit., states that no one will be surprised at this decision, seeing that chloroform, derived from whatever source, is a definite chemical compound, which modern methods of manufacture produce in a very high state of chemical purity.

Frerichs, F. W., reports a number of experiments made to provide an improved method for the manufacture of chloroform from bleaching powder and ethyl alcohol.—Tr. Am. Inst. Chem. Eng. 1911, v. 4, 1912, pp. 135–172.

Utech, P. Henry, asserts that the addition of about 4 per cent of alcohol insures a product which will keep indefinitely.—Western Druggist, 1911, v. 33, p. 14.

Baskerville, Chas., in a communication on the chemistry of anæsthetics discusses the making of chloroform, the variations in the requirements embodied in the several pharmacopœias, the possible contaminations of chloroform, and the detection of impurities.—J. Frankl. Inst. 1911, v. 172, pp. 124–139.

Braun, C., discusses the requirements to be made of a chloroform for anæsthesia and comments more particularly on the formaldehyde-sulphuric acid reaction, which is thought to be of doubtful utility.—Apoth.-Ztg. 1911, v. 26, pp. 166–167, 173–174.

The British Medical Journal (1911, v. 2, p. 1595) gives a brief outline of a discussion as to the relative merits of methyl, ethyl, and acetone chloroform.

Gauthier, L. (Bull. Pharm. Lyon, 1911, p. 61) describes a differential reaction for chloroform and bromoform.—Bull. pharm. Sud-Est, 1911, v. 16, p. 454.

Linke, H., reports that the sample of chloroform examined by him complied with both the sulphuric acid formaldehyde and the sulphuric acid time limit test.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 187–188.

Smith, Kline & French Co. (Analytical Report, 1911, p. 16) reports on 29 samples of chloroform. Three samples were rejected on account of impurities decomposable by sulphuric acid.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 35) report that they have found it necessary during the year to reject a consignment of chloroform on account of its failure to comply with the tests of the pharmacopœia, a dark brown color being produced on shaking with sulphuric acid.

The Biennial Report of the Inspection of Pharmacies, 1909–10, notes the occurrence of chloroform having a very irritating odor, browned by sulphuric acid and leaving on evaporation a colored residue. This very impure chloroform, nevertheless, contains no hydrochloric acid nor free chlorine.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 233; also J. Pharm. Anvers, 1911, v. 67, p. 522.

Baskerville, Charles, presents a list of anæsthetics, including general anæsthetics, local anæsthetics, and anæsthetic mixtures, both past

and present; with synonyms.—*Am. Druggist*, 1911, v. 58, pp. 72, 108, 139.

An editorial note (*Pharm. J.* 1911, v. 86, p. 768) calls attention to the centenary, June 7, of the birth of James Young Simpson, who discovered the anæsthetic properties of chloroform. See also *Montreal Pharm. J.* 1911, v. 22, pp. 175–177.

Dunkley, E. V., describes and illustrates a new frame for the administration of chloroform and ether by the open method.—*Lancet*, 1911, v. 181, p. 302.

The *Lancet* (1911, v. 181, p. 1851), in the yearly summary, calls attention to the exceptional number of valuable papers on the subject of anæsthetics.

Hellman, Alfred M., in discussing the use of chloroform as a general anæsthetic, states that the beginning dilation of the pupils is much more alarming with chloroform than with ether.—*Am. Med.* 1911, v. 17, p. 30.

The editor of the "Therapeutics" column discusses chloroform and its administration.—*J. Am. M. Assoc.* 1911, v. 57, pp. 1763–1765.

Meltzer, S. J., asserts that with proper supervision chloroform, by intratracheal insufflation, may be used for shorter operations with perfect confidence, and may be readily employed especially in individuals resistant to ether, at least, for the purpose of the induction of the anæsthesia.—*Ibid.* p. 524.

Fairley, H. P., presents a paper on the behavior of the blood pressure in chloroform and ether anæsthesia, with special reference to shock.—*Practitioner*, 1911, v. 86, pp. 265–270.

Bevan, Arthur Dean, concludes that chloroform must be discarded as a routine anæsthetic. It produces too many immediate and late deaths to warrant its general employment.—*J. Am. M. Assoc.* 1911, v. 57, pp. 1821–1824.

An editorial (*Pharm. J.* 1911, v. 86, pp. 235–236) calls attention to the following report on deaths by anæsthetics included in the seventy-second annual report of the Registrar-General of births, deaths, and marriages in England and Wales for the year 1909:

Anæsthetic.	Males.	Females.	Total.
A. C. E. mixture.....	2	.....	2
Chloroform.....	59	29	88
Chloroform and ether.....	15	3	18
Cocaine.....	1	1	2
Ether.....	5	6	11
Ethyl chloride and ether.....	2	.....	2
Stovaine.....	2	.....	2
Kind not stated.....	51	25	76
Total.....	137	64	201

Lumbard, Joseph E., in the presentation of a series of "Anæsthesia Don'ts," states that the majority of deaths under chloroform have occurred during the first period of its administration and that, while the toxic effects of chloroform often show themselves very suddenly, they may be delayed for days.—*Med. Rec.* 1911, v. 80, p. 1027.

Rankin, Wm., states that, by combining with the use of chloroform, the use of ether or of A. C. E. perfectly sound and prolonged anæsthesia can be obtained with a comparatively small amount of chloroform.—*Practitioner*, 1911, v. 86, p. 260.

The editor of the "Therapeutics" column asserts that the various alcohol, chloroform, and ether mixtures may be named, but only to be condemned. He gives the formulas for a number of these mixtures and notes that the A. C. E. mixture is attributed both to Harley and to the Medico-Chirurgical Society of London in 1864.—*J. Am. M. Assoc.* 1911, v. 3, p. 1915.

An editorial (*Brit. M. J.* 1911, v. 2, p. 1434) on an unfinished chapter in the history of anæsthesia, quotes the following from William Priestley: "Even the Chief of the Army Medical Service recommended the surgeons during the Crimean war not to use chloroform, as the pain inflicted by the knife was a wholesome stimulus, and its abolition likely to be pernicious."

Hewitt, Frederic W., discusses the position of the present reform movement in anæsthetics.—*Lancet*, 1911, v. 180, p. 1486-1489, 1562-1565. See also *Ibid.* p. 1672, and v. 181, pp. 47, 251, and 325.

Gatch, W. D., asserts that morphine, or any drug which depresses the respiration, retards the elimination of ether or chloroform.—*J. Am. M. Assoc.* 1911, v. 57, p. 1599.

Clark, Herbert, concludes, from experimental research, that chloroform in the form of small doses frequently repeated is a much more dangerous drug than when given in single much larger doses, whether by inhalation, subcutaneously, or by the stomach.—*Lancet*, 1911, v. 180, pp. 156-161.

Herzog and Betzel present observations on the disinfectant properties of chloroform and its action on yeast cells.—*Ztschr. physiol. Chem.* 1911, v. 74, pp. 221-225.

Schultz, W. H., reports observations on the use of chloroform as a remedy in the treatment of hookworm disease and points out that chloroform is by no means a harmless drug when taken in doses as usually recommended for expelling intestinal worms.—*Tr. Am. M. Assoc. Sec. Pharm. & Therap.* 1911, pp. 56-59; also *J. Am. M. Assoc.* 1911, v. 57, pp. 1102-1106.

An editorial (*J. Am. M. Assoc.* 1911, v. 57, p. 980) discusses the use of chloroform for the disinfection of typhoid carriers.

Lothian, W., reports a case of choking in a year-old stirk successfully treated with chloroform. He also states that this is the second

case in which he used chloroform for choking, the first being in a quey.—Vet. J. 1911, v. 67, pp. 357-358. See also Am. Vet. Rev. 1911, v. 39, p. 677.

Whipple and Hurwitz discuss the fibrinogen of the blood as influenced by the liver necrosis of chloroform poisoning, with protocols of their experiments.—J. Exper. M. 1911, v. 13, pp. 136-161.

Opie, Barker and Dochez discuss changes in the proteolytic enzymes and anti-enzymes of the blood serum produced by substances (chloroform and phosphorus) which cause degenerative changes in the liver.—J. Exper. M. 1911, v. 13, pp. 162-185.

Riedel's Berichte (1911, pp. 60-61) quotes K. Wirt, who recommends washing out the stomach with oil in cases of chloroform poisoning.

Additional references on the chemistry, pharmacology, toxicology, and therapeutic uses of chloroform will be found in Index Med.; J. Am. M. Assoc.; Chem. Abstr.; Exper. Sta. Rec.; Pharm. J.; Lancet; Zentralbl. Biochem. u. Biophysik; and Chem. Centralbl.

CHONDRUS.

Lloyd, John Uri, states that Irish moss has been known from an early period, its use being chiefly as a domestic medicine.—Bull. Lloyd Libr. 1911, No. 18, p. 16.

Sollmann, Torald, points out that chondrus and other gums give a golden or brownish-yellow color on heating with sodium hydroxide solution, but they do not reduce Fehling's solution even on prolonged heating.—Am. J. Pharm. 1911, v. 83, pp. 176-177.

Evans Sons Lescher & Webb (Analytical Notes 1911, 1912, p. 38) report that 1 sample of Irish moss of high mucilaginous value, apparently genuine, left 18.5 per cent of ash. Samples of French moss examined were apparently closely allied species to *Chondrus crispus*, but somewhat larger and more pigmented; they had very high gelatinization values.

CHROMII TRIOXIDUM.

Düsterbehn, F., notes that the Ph. Germ. V now describes chromic acid as being hygroscopic and requires that the color of a 10 per cent aqueous solution be yellow. The nonvolatile residue is restricted to 0.5 per cent.—Apoth.-Ztg. 1911, v. 26, p. 123. See also Pharm. J. 1911, v. 86, p. 496.

Kremann, R., reports observations on the solubility of chromium trioxide in water, and the behavior of the system $\text{CrO}_3\text{-H}_2\text{O}$ at low temperatures.—Monatsh. Chem. 1911, v. 32, pp. 619-622.

Smith, Kline & French Co. (Analytical Report, 1911, p. 17) reports on one sample of chromium trioxide. It contained sulphates and assayed only 82.5 per cent. The Pharmacopœia demands an absence of sulphates and a strength not less than 90 per cent.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 35) report that many grades of chromic acid are offered commercially. During the year they have met with samples assaying from 33.7 to 100.0 per cent of the trioxide (CrO_3).

Koenig, Paul, discusses the utilization of salts of chromium in the destruction of the *Bacillus pestis*.—Chem. Ztg. 1911, v. 35, pp. 205–206. See also pp. 442–443, 462–463.

CHRYSAROBINUM.

Lloyd, John Uri, states that goa powder was employed in native medications as a remedy in skin diseases, which brought it to the attention of physicians.—Bull. Lloyd Libr. 1911, No. 18, p. 16.

An answer to a correspondent states that the solubility of chrysarobin in ether is given as 114 parts. That being the case it is unreasonable to expect a perfect solution in making collodion preparations containing chrysarobin.—Meyer Bros. Drug. 1911, v. 32, p. 108.

Rosenthaler, L., describes and illustrates the nature of the material obtained from chrysarobin by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, p. 527.

Fischer and Gross, in a contribution to the knowledge of chrysophanic acid, report on the preparation of chrysophanic acid from chrysarobin.—J. prakt. Chem. 1911, v. 84, p. 370.

An unsigned article ("Das Rezept"; Vierteljahrschr. Prakt. Pharm. 1909, part I) states that chrysarobin stains are best removed by the aid of benzin, though chloroform or absolute alcohol will also answer the purpose. Warming the solvent increases its effectiveness.—Am. Druggist, 1911, v. 58, p. 11.

Gehe & Co. (Handelsbericht, 1911, p. 132), in commenting on the uses of chrysarobin, point out that this substance is incompatible with Hebra's ointment, the chrysarobin being destroyed and the mixture assuming a dark color owing to the production of oxychrysarobin and chrysaloquin.

Unna, P. G., presents some new facts concerning chrysarobin and urges the addition of lead oleates to chrysarobin ointments. He recommends this form of treatment of psoriasis as an especially quick and thorough one.—Pharm. J. 1911, v. 86, p. 62.

CIMICIFUGA.

Lloyd, John Uri, states that cimicifuga was highly valued by the Indians, who employed decoctions of the drug for diseases of women. It was introduced into domestic American medicine and consequently given much attention by the earliest writers.—Bull. Lloyd Libr. 1911, No. 18, p. 17. See also Eclectic Med. Glean. 1911, v. 7, pp. 406–407.

Holm, Theo., presents a supplementary note in which he describes and illustrates seedlings of *Cimicifuga racemosa* Nutt.—Merck's Rep. 1911, v. 20, p. 6.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for *cimicifuga*: Water content, 7.97 to 10.04 per cent; ash content, 9.01 to 15.35 per cent; alkalinity of water soluble ash, 1.22 to 3.09 per cent; total alkalinity of ash, 3.19 to 6.63 per cent.—*Proc. Ohio Pharm. Assoc.* 1911, p. 70.

Wood, H. C., Jr., reports that in the opinion of the committee of the Philadelphia Branch of the American Pharmaceutical Association *cimicifuga* seems of too little importance to require physiologic standardization.—*J. Am. M. Assoc.* 1911, v. 56, p. 606.

Hodge, T. S., states that *macrotys racemosa*, also known as *cimicifuga*, rattleroot, black snakeroot, and squaw root, is an exceedingly powerful and useful remedy. Its influence over the nervous system is marked, it having been successfully used in epilepsy, nervous excitability, asthma, and many spasmodic affections; in acute muscular rheumatism; in muscular pains, and uterine pain with tenderness.—*Nat. Eclect. M. Assoc. Quart.* 1910-11, v. 2, pp. 215-216.

Woodbury, Benj. C., Jr., reports that *cimicifuga* has for the past six months given entire relief in a case of chronic headache of six years' standing, following hysterectomy. Pains occipital and on vertex, extending to cervical muscles, with flushings.—*Hahnemann. Month.* 1911, v. 46, p. 474.

Palmer, Chauncey D., states that *cimicifuga* is an efficient remedy of no mean or uncertain value, while in the treatment of rheumatic conditions it has now been largely superseded by the various salicylates.—*Eclectic Med. Glean.* 1911, v. 7, pp. 588-589.

An unsigned abstract (N. A. J. H.) states that *actea racemosa* is the remedy for depression alternating with good spirits.—*J. Am. Inst. Homœop.* 1911, v. 3, p. 162.

CINCHONA.

Lloyd, John Uri, points out that according to tradition the medicinal qualities of cinchona were known to the aborigines of South America from the earliest times.—*Bull. Lloyd Libr.* 1911, No. 18, pp. 17-18. See also *Apothecary*, 1911, v. 23, June, p. 25.

Sheridan, John J., outlines the history of cinchona and of its alkaloids.—*Am. Med.* 1911, v. 17, pp. 135-138.

Gehe & Co. (*Handelsbericht*, 1911, pp. 68-70) review the market conditions for cinchona, and present a table showing the amount of bark offered and sold at the several auctions during the year 1910.

Harris, Wm., points out that the trees producing medicinal cinchona barks are natives of tropical South America, where they are found in the dense forests of the western parts of the continent at a height of 2,500 to 9,000 feet above the level of the sea, and in an equable but comparatively cool climate.—*Bull. Dept. Agric. Jamaica*, 1909-1911, v. 1, pp. 245-246.

An unsigned note (Chem. & Drug. 1911, v. 79, p. 487) reviews van Leersum's report on Java cinchona and reproduces his statistics showing yield of bark from 1895 to 1910. See also v. 78, p. 321; and Pharm. Weekblad. 1911, v. 48, pp. 720, 1319.

Harris, William, reviews the introduction of the several species of cinchona into Jamaica and reports that in 1862 an experimental cinchona plantation of 3 acres was established at Mount Essex.—Bull. Dept. Agric. Jamaica, 1911, v. 1, No. 4, pp. 245-246.

Rant, of the Java Department of Agriculture, has observed what he thinks may be a new fungoid disease on cinchona plants grown in damp and shady places.—Chem. & Drug, 1911, v. 78, p. 415.

Miller, Adolph W., reports that on account of the large supplies of cultivated barks, sent in ever increasing quantities to the Amsterdam markets, prices have been low throughout the year.—Proc. N. W. D. A. 1911, p. 84.

A review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 206) discusses the present assay process for cinchona and the preparations of cinchona.

Gehe & Co. (Handelsbericht, 1911, p. 70) point out that the Ph. Germ. V continues as before to describe only *Cinchona succirubra* Pavon, and that other barks, even those containing more alkaloids, are not admissible. The bark is also restricted to the stem and branch bark, and the root bark is therefore not official.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 91-94) discuss the testing and assay of cinchona and present a table showing the alkaloid content requirement and the limitations for ash included in the several pharmacopœias.

Vigneron makes a contribution to cinchona assay, the estimation of quinine and the estimation of total alkaloids from the practical point of view.—J. Pharm. et Chim. 1911, v. 3, pp. 103-108.

Fromme, G., reports comparative assays of cinchona by the gravimetric method and by titration according to the method suggested by Frey, using methyl red as an indicator, and points out that the results obtained by titration are generally low.—Caesar & Loretz, Jahres-Bericht, 1911, pp. 17-19.

Dohme and Engelhardt state that the Fromme process of assay for cinchona has always given them satisfactory results. It is a short one and the determination can easily be carried out in two hours.—Am. J. Pharm. 1911, v. 83, p. 520.

Herzog, J., states that he has been unable satisfactorily to use hematoxylon as an indicator in the titrimetric determination of alkaloids of cinchona bark.—Ber. pharm. Gesellsch. 1911, v. 21, p. 203.

Rosenthaler, L., reviews the pyroanalytical results that have been obtained with cinchona bark and describes and illustrates the crystals found in the tar.—*Ibid.* p. 340.

Rabe and Marshall, in a contribution to the knowledge of cinchona alkaloids, report observations on the fluorescence phenomenon of cinchona alkaloids.—*Ann. Chem.* 1910, v. 382, pp. 360–364.

Rabe, Paul, in a contribution to the knowledge of cinchona alkaloids, reports a partial synthesis of cinchonin.—*Ber. deutsch. chem. Gesellsch.* 1911, v. 44, pp. 2088–2091.

Kiezka, M., reviews the present status of our knowledge of the cinchona alkaloids.—*Pharm. Prax.* 1911, v. 10, pp. 250–251.

Vanderkleed, Chas. E., reports 26 assays of cinchona; lowest 5.026 per cent, highest 11.000 per cent, total alkaloids; all above standard.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 132.

Ferguson, George A., reports on 2 samples of cinchona bark, yellow, containing 5.40 and 6.23 per cent total alkaloids.—*Proc. New York Pharm. Assoc.* 1911, p. 153.

Noyes, C. R., reports the assay of 3 samples of cinchona, yielding from 4.23 to 4.9 per cent of total alkaloids.—*Proc. Minnesota Pharm. Assoc.* 1911, p. 75.

Schneider, Albert, reports on 2 samples of yellow cinchona, one of which was adulterated.—*Pacific Pharm.* 1911, v. 5, p. 178.

The Biennial Report of the Inspection of Pharmacies, 1909–10, condemns as irregular the practice of certain pharmacists who dispense unassayed cinchona on prescriptions of physicians who call for a decoction made according to the old pharmacopœia.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 229. Also *J. Pharm. Anvers*, 1911, v. 67, p. 518.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 20) outline a method for the estimation of alkaloids in the tincture of cinchona.

The Biennial Report of the Inspection of Pharmacies, 1909–10, states that the alkaloidal strength of tincture of cinchona is sometimes very weak; its assay is neglected.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 240. Also *J. Pharm. Anvers*, 1911, v. 67, p. 564.

Javillier and Guérithault discuss the examination of the crystalline deposit in fluid extract of cinchona, the estimation of cinchona alkaloids and quinine silicotungstate.—*Bull. sc. pharmacol.* 1911, v. 18, pp. 93–96.

An unsigned article (*Am. Druggist*, 1911, v. 58, p. 137) points out that the *extractum chinæ fluidum* of the *Ph. Germ. V* is directed to contain at least 3.5 per cent of alkaloids, calculated as quinine and cinchonine, of the average molecular weight of 309. The preparation is made by percolating cinchona with a mixture of hydrochloric acid, glycerin, and water. See also *Chem. & Drug.* 1911, v. 78, p. 632.

Bruder, Otto E., suggests that, in place of the proposed liquid extract of cinchona N. F., a 50 per cent preparation be included.—*N. A. R. D. Notes*, 1911–12, v. 13, p. 682.

CINCHONA RUBRA.

Müller, Adolph W., states that the true Peruvian red cinchona has almost disappeared from our markets.—Proc. N. W. D. A. 1911, p. 84.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 20) report on 1 sample of long quills of the official red cinchona which was found to contain 9.4 per cent of total alkaloids, and a sample of short quills which contained 6.7 per cent.

Ferguson, George A., reports on 1 sample of cinchona bark, red, containing 6.288 per cent total alkaloids.—Proc. New York Pharm. Assoc. 1911, p. 153

Smith, Kline & French Co. (Analytical Report, 1911, p. 17) reports that 3 samples of red cinchona were found to contain from 5.55 to 8.2 per cent anhydrous cinchona alkaloids.

Schneider, Albert, reports on 5 samples of red cinchona, 2 of which were adulterated.—Pacific Pharm. 1911, v. 5, p. 178.

CINCHONIDINÆ SULPHAS.

Paneth, Fritz, reports observations on the decomposition of chinidine (cinchonine) and cinchonidine by means of sulphuric acid.—Monatsh. Chem. 1911, v. 32, pp. 257-274.

CINCHONINÆ SULPHAS.

Dobbie and Lauder report observations on the absorption spectra of cinchonine, quinine, and their isomerides.—J. Chem. Soc. Lond. 1911, v. 99, pp. 1254-1261.

Pfannl, Michael, in a contribution on the chemistry of cinchonine, reports observations on the decomposition of chinidine by means of sulphuric acid.—Monatsh. Chem. 1911, v. 32, pp. 241-255.

CINNAMOMUM SAIGONICUM.

Lloyd, John Uri, states that cassia cinnamon was probably the first spice sought in the commerce of the Orient, its early record being lost in antiquity.—Bull. Lloyd Libr. 1911, No. 18, p. 18.

Williams, C. L. L., reports that Huang Hsi-ch'uan, a member of the Chinese provisional assembly, has experimented in cinnamon culture at Kaying and formed a company to start a model plantation.—Cons. & Tr. Rep. July 3, 1911, p. 42.

Anderson, George E., reports a notable increase in the trade in cassia between Hongkong and the United States.—*Ibid.* Apr. 20, 1911, p. 302.

Rairden, B. S., reports that the exports of cassia from Netherlands India to the United States during July, August, and September, 1911, amounted to 261,320 pounds.—*Ibid.* Dec. 13, 1911, p. 1319.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for *cinnamomum saigonicum*: Water content, 8.91 per cent; ash content, 3.66 per cent; alkalinity of water soluble ash, 1.1 per cent; total alkalinity of ash, 3.36 per cent.—Proc. Ohio Pharm. Assoc. 1911, p. 70.

Oberndörfer, A., discusses requirements for cinnamon, and points out that the ash content is not the all important factor.—Ztschr. öffentl. Chem. 1911, v. 17, p. 14.

Meyer, Julius, discusses the structural characteristics of Seychelle cinnamon, Chinese cinnamon, and Saigon cassia.—Apoth.-Ztg. 1911, v. 26, p. 334.

Rosenthaler, L., criticizes a contribution by Julius Meyer on the commercial cinnamon barks.—Ber. Pharm. Gesellsch. 1911, v. 21, p. 272.

Umney and Bennett state that the figures for ash vary from 2.6 to 5.6 and for ether extract 1.5 to 2.9 in the quills, while in the powders the figures are, respectively, 3.1 to 7.3 and 1.9 to 2.6.—Pharm. J. 1911, v. 86, p. 596. See also Chem. & Drug. 1911, v. 78, p. 673, and Drug Topics, 1911, v. 26, p. 148.

Schneider, Albert, reports on 26 samples of cinnamon, 9 of which were adulterated with worthless bark, wood, cereal, and peas.—Pacific Pharm. 1911, v. 5, p. 177.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 21) report that 2 samples of cinnamon bark left, respectively, 5 and 5.6 per cent of ash.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 10) report that the ash yield from 7 samples of cinnamon ranged from 2.55 to 3.91 per cent.

Kappeller, G., discusses the unmixing of powdered cinnamon for the determination of the sand content.—Ztschr. Unters. Nahr. u. Genussm. 1911, v. 22, pp. 729–730.

Hoffman and Evans, in a report of observations on the use of spices as preservatives, points out that cinnamic aldehyde, even in the smallest proportion used, delayed growth 60 days.—J. Ind. & Eng. Chem. 1911, v. 3, pp. 835–838.

CINNAMOMUM ZEYLANICUM.

Magelssen, William C., reports that with the extension of rubber and coconut cultivation in Ceylon owners of cinnamon plantations in suitable localities have found it to their advantage to root out cinnamon and plant either rubber or coconuts. To make good the deficiency in the European market, cassia bark, imported from China, is being used as a substitute for cinnamon.—Cons. & Tr. Rep. Apr. 10, 1911, p. 137. See also Caesar & Loretz (Jahres-Bericht, 1911, pp. 19–20).

The Colombo Chamber of Commerce announces that for the first six months of 1911 the shipments of cinnamon from Ceylon to the United States amounted to 203,660 pounds of quills and 12,320 pounds of chips, as compared with 152,975 pounds and 121,339 pounds, respectively, for the same period of 1910.—Cons. & Tr. Rep. Aug. 12, 1911, p. 675.

COCA.

Lloyd, John Uri, states that coca was honored in their sacred ceremonies by the natives of the lands producing it.—Bull. Lloyd Libr. 1911, No. 18, pp. 18–25. Also J. Therap. & Diet. 1911, v. 5, pp. 36–45.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 112–113) discuss the valuation of coca and present a table showing the alkaloid requirements included in several pharmacopœias.

Hartwich, C., thinks it quite correct not to Latinize coca into *Folium Cocæ*, as the name itself is Peruvian. He also points out that the Ph. Germ. V description limits the use of coca to a typical form and eliminates varieties like *E. spruceanum*.—Apoth.-Ztg. 1911, v. 26, p. 13.

An editorial (Chem. & Drug. 1911, v. 78, p. 319) reviews the report on the production and use of coca leaves, in the current issue of the "Bulletin of the Imperial Institute." Also Brit. & Col. Drug. 1911, v. 59, p. 148.

Dohme and Engelhardt think that in the assay process for coca the percolation process should be abandoned. Keller's method, using plain ether, gives very satisfactory results.—Am. J. Pharm. 1911, v. 83, p. 521.

De Jong, A. W. K., discusses the assay of coca leaves and recommends canadol as the solvent.—Arch. Pharm. 1911, v. 249, pp. 209–214.

Rosenthaler, L., describes and illustrates the nature of the material obtained from coca leaves by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, p. 530.

Vanderkleed, Chas. E., reports on 2 assays of coca leaf: Lowest, 0.955; highest, 1.000 per cent alkaloids; both above standard.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

Coblentz, Virgil, reports that while the samples of fluid extract of coca dispensed in the various pharmacies in New York City were fairly good, one party dispensed a fluid not coca extract.—J. Ind. & Eng. Chem. 1911, v. 3, p. 540.

Caspari, Chas., jr., thinks it difficult to explain the retention of fluid extract of coca, which is known to deteriorate rapidly.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 612.

COCAINA.

Lloyd, Gordon, states that cocaine, the leading local anæsthetic, was not used as a medicine till Koller tried it in 1884, although Gæ-

deka had extracted the alkaloid from coca leaves twenty years earlier.—Rocky Mountain Druggist, 1911, v. 25, Mar., p. 43.

Sperber, O., describes and illustrates the production of cocaine in Peru.—Tropenpflanzer, 1911, v. 15, pp. 684–687. See also Sc. Am. Suppl. 1911, v. 72, p. 171.

The Paris Correspondent (Chem. & Drug. 1911, v. 79, p. 5) reports that the Minister of Commerce has ascertained that there is only one maker of cocaine in France.

Mossler, Gustav, presents a comprehensive review of the chemistry of natural and synthetic local anæsthetics.—Ztschr. allg. österr. Apoth.-Ver. 1911, v. 49, pp. 1–2, 15–16, 27–28, 41–42.

Heubner, in a review of the Ph. Germ. V, states that the number of cocaine substitutes that have been included in the Pharmacopœia is altogether larger than need be.—Therap. Monatsh. 1911, v. 25, p. 295.

Hankin, E. H., considers the permanganate test a convenient method for differentiating between cocaine and its several substitutes, like stovaine, alypin, and tropacocaine.—Ztschr. ang. Chem. 1911, v. 24, p. 174. See also Analyst, 1911, v. 36, pp. 2–6; and Pharm. J. 1911, v. 86, p. 94.

Seiter, Francis J., discusses the permanganate test for cocaine, and points out that acidity of the liquid favors precipitation of cocaine permanganate.—Am. J. Pharm. 1911, v. 83, pp. 265–268. See also Merck's Rep. 1911, v. 20, p. 304.

Seiter and Enger discuss the identification of cocaine and related products, and present a table showing the behavior of the several substances with different reagents.—Am. J. Pharm. 1911, v. 83, pp. 195–201. See also Merck's Rep. 1911, v. 20, pp. 225–226, and Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, pp. 402–403.

Thomann discusses the quantitative estimation of cocaine in solution.—Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, pp. 178–179.

Nymann and Björkstén report observations on the precipitation of cocaine in solution by means of platinum chloride.—Pharm. Zentrallh. 1911, v. 52, pp. 71–74.

Lüders, Richard, discusses the development in our knowledge of the chemistry of local anæsthetics during the year 1910.—Chem. Ind. 1911, v. 34, pp. 149–151.

Roques discusses the several cocaine salts employed in therapeutics.—J. Pharm. et Chim. 1911, v. 4, p. 119.

Erhardt, E., reports his experience with Arabic acid salts of the cocaine series for lumbar anæsthesia.—Arch. internat. pharmacod. et therap. 1911, v. 21, pp. 227–242. See also Merck's Rep. 1911, v. 20, p. 218.

Bevan, Arthur Dean, asserts that spinal cord anæsthesia has to-day no place in surgery.—J. Am. M. Assoc. 1911, v. 57, p. 1824.

Kalb, Jos., reviews the chemistry and the history of anæsthetics, and, commenting on the cocaine substitutes, expresses the belief that

at the present time these articles have not succeeded in displacing cocaine.—*Pharm. Ztg.* 1911, v. 56, pp. 880–881.

Fisher, Guido, in discussing the use of local anæsthesia in dentistry, calls attention to some of the drawbacks of cocaine.—*Dental Cosmos*, 1911, v. 53, pp. 168–177.

Riedel's *Berichte* (1911, pp. 61–62) quotes M. Senator, who, as the result of experimental observations, concludes that cocaine is still the most desirable local anæsthetic and is not advantageously substituted by any one of the newer products.

Gros, Oscar, in a contribution on narcotics and local anæsthetics, reports a number of experiments with cocaine and other local anæsthetics.—*Arch. exper. Path. u. Pharmacol.* 1910–11, v. 64, pp. 67–71.

Braithwaite, L. R., presents a communication on cocaine in minor surgery.—*Practitioner*, 1911, v. 86, pp. 248–258.

Price and Leahey report grave and prolonged cardiac failure following the use of cocaine in dental surgery.—*Lancet*, 1911, v. 180, p. 797.

An unsigned abstract (*Hom. Envoy*) states that cocaine gives the promptest temporary relief in hay fever, though there is no cure in it, but that drug easily fastens its hold on the user, as is shown by the drastic laws passed in many cities protecting its sale to the public.—*J. Am. Inst. Homœop.* 1911, v. 3, p. 1037.

Biondi, G. C., calls attention to some of the evils produced by the persistent and immoderate use of cocaine.—*Am. Med.* 1911, v. 17, pp. 465–468.

Pritchard, B. E., expresses the belief that the publicity that has been given to cocaine in journals of various kinds has induced countless thousands of persons to use this drug.—*Proc. Pennsylvania Pharm. Assoc.* 1911, pp. 227–234.

An editorial (*Drug. Circ.* 1911, v. 55, pp. 71–74) calls attention to and reproduces a brief of the evidence given at a hearing before the Committee on Ways and Means of the National House of Representatives on certain bills introduced for the purpose of restricting the sale of opium and other narcotics.

Koch, Christopher, prefaces an account of the Pennsylvania cocaine and morphine crusade with a statement that in the United States we manufacture 150,000 ounces of cocaine annually, of which 130,000 ounces is used to make demons of human beings.—*Midl. Drug.* 1911, v. 45, pp. 211–216.

The Board of Health of New York City publishes an amendment to section 182 of the Sanitary Code, with reference to the sale of cocaine and like narcotics.—*Pract. Drug.* 1911, v. 29, Mar., p. 45.

An editorial (*Pharm. J.* 1911, v. 87, p. 807) states that the illicit traffic in morphine and cocaine in India, China, and other far eastern countries is said to be becoming an evil worse than opium smoking,

certain to increase as restrictions become more stringent. The British Government urges concerted action of the Powers.

The India Correspondent (*Chem. & Drug.* 1911, v. 79, p. 804) notes that in the latest report on the administration of the Excise Department of Burma it is stated that the cocaine habit is spreading in the province. Cocaine is not taken merely as a substitute for opium. In industrial centers women have taken to the drug.

The Canadian Correspondent (*Lancet*, 1911, v. 180, p. 64) states that in one police district alone in Montreal there are said to be over 600 young people of both sexes addicted to cocaine.

An editorial (*Montreal Pharm. J.* 1911, v. 22, pp. 225-228) states that notwithstanding the severe provisions of the cocaine laws, Federal and Provincial, the sale and supply of cocaine still continues. It is asserted that probably 95 per cent of the total amount of cocaine sold is sold by business houses and individuals absolutely outside of the drug trade.

COCAINE HYDROCHLORIDUM.

Düsterbehn, F., points out that the Ph. Germ. V now states that cocaine hydrochloride is readily soluble in water and in alcohol. On heating to 100° the salt should not lose weight.—*Apoth.-Ztg.* 1911, v. 26, p. 166.

An unsigned review of the Ph. Germ. V (*Chem. & Drug.* 1911, v. 78, p. 13) states that a melting point of 180° to 186 °is proposed for the Ph. Brit., while the Ph. Germ. V requires a melting point of 183°.

Roques, Ferdinand, presents a communication on several of the salts of cocaine employed sometimes in therapy. He considers the hydrochlorate, perhaps, the best defined and controlled.—*Bull. sc. pharmacol.* 1911, v. 18, pp. 216-218.

Kebler, L. F. (*Mo. Cyc. & Med. Bull.* January), estimates the present annual consumption of cocaine in the United States at approximately 150,000 ounces, an amount ten times as great as is actually needed.—*J. Am. M. Assoc.* 1911, v. 56, p. 695.

Lackey, R. H., reports that the sale of cocaine muriate has been very largely reduced. This is due to the operation of the laws in several States, to the activity of the officers in charge of the enforcement of the law, and to the greater care used by wholesale distributors.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 71.

COCCUS.

Lloyd, John Uri, states that cochineal was early used in domestic medicine as a remedy for whooping cough and neuralgic affections, but it has never been seriously considered by the medical profession.—*Bull. Lloyd Libr.* 1911, No. 18, p. 26.

Gehe & Co. (*Handelsbericht*, 1911, p. 150) point out that the use of cochineal in dyeing is decreasing very rapidly and the price of the drug is now unusually low.

Dohme and Engelhardt think that it would be advisable to include a determination of the color strength of cochineal; also an estimation of the moisture.—*Am. J. Pharm.* 1911, v. 83, p. 521.

Caesar & Loretz (*Jahres-Bericht*, 1911, pp. 90-91) discuss the testing of cochineal and present a table showing the limitations for ash included in the several pharmacopœias.

Meldrum, Andrew Norman, in a discussion on substances related to cochenillic and carminic acids, reports observations on the synthesis of the methyl ether of β and of γ coccinic acid.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 1712-1721.

Rabe, R. P., states that *coccus cacti* is indicated in cases of whooping cough, later stages, worse 5 a. m. and 11 p. m.; relief from cold water; open air relieves.—*Hahnemann. Month.* 1911, v. 46, p. 399.

CODEINA.

"M. & R.," commenting on the ordinance of the Board of Health of the city of New York, assert that codeine and heroin are not salts either of opium or of morphine; the one being an active principle and the other a synthetic compound. They add that all authorities agree that codeine does not create a habit.—*Spatula*, 1910-11, v. 17, p. 30.

Andrews, Albert E., outlines a method for the determination of codeine in opium, which has been employed in a very large number of analyses carried out in the Scientific and Technical Department of the Imperial Institute.—*Analyst*, 1911, v. 36, p. 489.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 23) report that 1 sample of codeine melted, when dry, at from 154° to 155°.

Emery, W. O., in the referee report on headache mixtures, outlines a method for determining codeine.—*Proc. Assoc. Off. Agric. Chem.* 1911, 28th Ann. Conv. pp. 236-241. (*Bull. Bur. Chem. U. S. Dept. Agric.* 1912, No. 152.)

Vieth, H., in a report of several new ethers of morphine, points out that codeine from a toxicologic as well as from a therapeutic point of view, has attracted considerable attention. It was first produced synthetically by Dott, and subsequently by Knoll.—*Arch. internat. pharmacod. et therap.* 1911, v. 21, p. 473.

Mossler and Tschebull report some observations on the chemistry of codeine oxide and its salts.—*Ber. deutsch. chem. Gesellsch.* 1911, v. 44, pp. 105-109.

Freund and Speyer report some further observations on the examination of codeine oxide.—*Ibid.* pp. 2339-2353.

Dobbie and Lauder report an analysis of a new alkaloid from opium for which the name neopine had been suggested. They conclude that the alkaloid is almost certainly a hydroxycodine, but that it is not identical with the hydroxycodine prepared by Ach and

Knorr (Ber. 1903, v. 26, p. 3087) by the oxidation of codeine.—J. Chem. Soc. Lond. 1911, v. 99, pp. 34–35.

CODEINÆ PHOSPHAS.

Düsterbehn, F., notes that the Ph. Germ. V has modified the identification tests for codeine phosphate. On heating to 100°, codeine phosphate is stated to lose from 8.2 to 8.5 per cent in weight.—Apoth.-Ztg. 1911, v. 26, p. 172.

Linke, H., calls attention to the fact that the Ph. Germ. V now permits a loss on drying at 100° of from 8.2 to 8.5 per cent.—Ber. Pharm. Gesellsch. 1911, v. 21, p. 188.

The Paris Pharmaceutical Society suggests that the Codex statement should read soluble entirely in a large excess of acetic acid or in nitric acid.—J. Pharm. et Chim. 1911, v. 4, p. 437.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 23) point out that the codeine phosphate handled in England practically confirms the Ph. Brit. formula; the anhydrous codeine content is invariably higher than that required by the U. S. P. formula.

COLCHICI CORMUS.

Fabinyi, R., discusses the colorimetric estimation of morphine and of colchicine.—Pharm. Post, 1911, v. 44, p. 836.

Ferguson, George A., reports on 3 samples of colchicum corm, varying in colchicine from 0.334 to 0.349 per cent.—Proc. New York Pharm. Assoc. 1911, p. 152.

Smith, Kline & French Co. (Analytical Report, 1911, p. 17) reports that 1 sample of colchicum corm was found to contain 0.39 per cent of colchicine.

Vanderkleed, Chas. E., reports on 5 assays of colchicum root, lowest 0.390 per cent, highest 0.438 per cent of colchicine, all above standard.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 24) report 1 sample of colchicum corm assayed by the method of Farr and Wright, which gave 0.25 per cent of noncrystalline pale colored alkaloid.

Leming, W., states that the specific indications for colchicum are arthritis and rheumatoid inflammations with gaseous distension of the abdomen, nausea and loathing for food, with evidences of lack of uric acid elimination.—Eclectic M. J. 1911, v. 71, p. 71.

Stambach, H. L., reports the use of colchicum in a case with small painfully acute; nausea and faintness from the odor of cooking food, especially fish, eggs, or fat meat; aversion to food, loathing even the sight and still more the smell of it; abdomen immensely distended with gas, feeling as if it would burst.—Hahnemann. Month. 1911, v. 46, p. 475.

COLCHICI SEMEN.

Lloyd, John Uri, states that colchicum was known in very early days. It was used as a rheumatic or gout remedy by the Arabians, as noted in the writings of Tragus, who warns his readers against its use in gout.—Bull. Lloyd. Libr. 1911, No. 18, p. 26.

Hartwich, C., in commenting on the Ph. Germ. V description of colchicum seed, expresses the belief that the botanical description is satisfactory, but thinks that some indication might have been given that the qualitative test is to indicate colchicine.—Apoth.-Ztg. 1911, v. 26, p. 94.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 2) recommends that colchicum seed be not assayed, there being no accurate and sufficiently convenient process available. See also Pharm. J. 1911, v. 87, p. 524.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 132-133) discuss the valuation of colchicum seed and present a table showing the alkaloid content requirements and the limitations for ash included in several pharmacopœias.

Burmam, James, in a discussion of the annual variation in the active principles in a number of medicinal plants, reports that colchicum seed was found to vary from 0.144 per cent of colchicine in 1909 to 0.190 per cent in 1907.—Schweiz. Wehnschr. Chem. u. Pharm. 1911, v. 49, p. 8.

Fabinyi, R., discusses the colorimetric estimation of morphine and colchicine.—Chem. Ztg. 1911, v. 35, p. 1099.

Dohme and Engelhardt point out that the results obtained by the present assay method are absolutely wrong, that the residue calculated as colchicine contains only about 50 per cent of the alkaloid. The assay process should be thoroughly revised.—Am. J. Pharm. 1911, v. 83, p. 521.

Schneider, Albert, reports on 2 samples of colchicum, one of which was adulterated with vegetable fiber.—Pacific Pharm. 1911, v. 5, p. 177.

Ferguson, George A., reports on 4 samples of colchicum seed, varying in colchicine content from 0.482 to 0.602 per cent.—Proc. New York Pharm. Assoc. 1911, p. 152.

Vanderkleed, Chas. E., reports 3 assays of colchicum seed; lowest 0.516 per cent, highest 0.784 per cent colchicine; all above standard.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

Heldmann, P. K., suggests omitting wine of colchicum, and states that the tincture of colchicum seed (assayed) is a superior preparation.—Proc. New York Pharm. Assoc. 1911, p. 92.

Beringer, George M., points out that the Ph. Germ. V directs that when vinum colchici is prescribed the tincture of colchicum is to be dispensed therefor.—Proc. New Jersey Pharm. Assoc. 1911, p. 78.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 3) recommends that tincture of colchicum be made with 10 per cent w/v of the seeds and with 70 per cent of alcohol, to approximate it to the requirements of the International Agreement. See also Pharm. J. 1911, v. 87, p. 847.

Dawson, E. S., suggests that in the making of fluid extract of colchicum seed the drug be first rendered fat free by percolating with gasoline.—Proc. New York Pharm. Assoc. 1911, p. 92.

Pearson, W. A., reports finding 1 sample of fluid extract of colchicum seed that contained 0.75 per cent of colchicine, nearly twice the amount required by the U. S. P.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 121. See also Smith, Kline & French Co. (Analytical Report, 1911, p. 23).

Leming, W., states that the specific indications for colchicum autumnale are arthritis and rheumatoid inflammations with gaseous distention of the abdomen, nausea and loathing for food, with evidence of lack of uric acid elimination.—J. Therap. & Diet. 1911, v. 5, p. 123. Also Ellingwood's Therap. 1911, v. 5, pp. 56-57.

COLCHICINA.

An unsigned article (Pharm. Zentralh. 1911, v. 52, pp. 508-509) discusses the chemistry and composition of colchicine.

Sanno, Y., in a study on the influence of temperature on the toxic susceptibility of the frog, reports experiments with atoxyl and colchicine.—Arch. exper. Path. u. Pharmacol. 1911, v. 65, pp. 325-336.

Butler, George F., in a review of the treatment of gout, points out that colchicine seems to have a specific influence, and that the objections to its use are ungrounded.—Am. J. Clin. Med. 1911, v. 18, pp. 445-448.

COLLODIUM.

Düsterbehn, F., notes that the Ph. Germ. V requires that collodion dried at 100° should leave at least 4 per cent of residue.—Apoth.-Ztg. 1911, v. 26, p. 172. See also Pharm. J. 1911, v. 86, p. 654; and Ber. pharm. Gesellsch. 1911, v. 21, p. 188.

Whitney, D. V., reports a sample of collodion, purchased in original (tin) package, that had turned to dark amber color with floating particles; it also showed the presence of iron. A rusty container had evidently been used.—Proc. Missouri Pharm. Assoc. 1911, p. 96.

Fuchs, W. (Münch. med. Wehnschr. v. 58, No. 22), reports successful results from the treatment of furuncles by painting a ring of collodion around the base of the boil several times a day, widening the ring on the outside, but not encroaching on the boil.—J. Am. M. Assoc. 1911, v. 57, p. 175.

COLLODIUM FLEXILE.

Roderfeld, A., in a review of the Ph. Germ. V, points out that elastic collodion is now directed to be made by mixing 97 parts of collodion with 3 parts of castor oil.—Apoth.-Ztg. 1911, v. 26, p. 262. See also Chem. & Drug. 1911, v. 78, p. 631.

COLOCYNTHIS.

Lloyd, John Uri, notes that while colocynth is used in Morocco for the purpose of protecting woolen clothing from moths, the purgative qualities of the drug do not seem to be known to the native doctors.—Bull. Lloyd Libr. 1911, No. 18, pp. 26–27. See also Ellingwood's Therap. 1911, v. 5, pp. 171–172.

Tunmann, O., in discussing the drug trade of Hamburg, states that colocynth occurs in a number of varieties and comes into the market principally from Egypt, Spain, Morocco, Persia, Cyprus, and Syria.—Apoth.-Ztg. 1911, v. 6, p. 378.

Power, F. B., reports that a complete examination of Turkish colocynth showed that the pulp made up 24.5 per cent of the whole fruit. From an alcoholic extract, besides numerous other compounds, some alpha elaterin was obtained in sufficient quantities for a complete examination. The ether and chloroform extracts of the resin were markedly purgative.—Chem. & Drug. Australas. 1911, v. 26, p. 59.

Rusby, H. H., suggests as a permissible limit about 5 per cent of seeds. The powdered article should be separately defined as containing such an admixture of seeds.—Pharm. Era, 1911, v. 44, p. 95.

Wiley, H. W., reports powdered colocynth containing a large amount of the seed specifically excluded by the Pharmacopœia.—Ann. Rep. U. S. Dept. Agric. 1911, 1912, p. 424.

Jaffa, M. E., reports a sample of powdered colocynth consisting largely of seeds.—Bull. California Bd. Health, 1911, v. 7, p. 164.

Smith, Henry L., reports that he has found powdered colocynth seed in a number of samples of colocynth and henbane pills recently examined.—Pharm. J. 1911, v. 86, p. 453.

Notice of Judgment, No. 1012, under the food and drugs act, deals with the adulteration and misbranding of colocynth.

"G. B. K.," discussing some recent Notices of Judgment, criticizes the U. S. P. definition of colocynth and can hardly see how the powdered drug as officially recognized by the Pharmacopœia may be held to be an impure product.—Midl. Drug. 1911, v. 45, p. 432.

Smith, Kline & French Co. (Analytical Report, 1911, p. 17) reports that 2 lots of colocynth pulp consisted of approximately 72 per cent by weight of pieces of dried pulp, and about 28 per cent of the material was in the form of a fine powder containing about 3 per cent of seeds. See also Proc. Pennsylvania Pharm. Assoc. 1911, p. 121; and Bull. Am. Pharm. Assoc. 1911, v. 6, p. 344.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 24) report that one sample of colocynth pulp contained 0.49 per cent of fat.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 11) report that 3 commercial specimens of colocynth pulp gave the following results: Ash, 6.32 to 11.62 per cent, ether soluble matter, traces to 17.47 per cent. A sample of pulp prepared by careful hand picking gave on assay: Ash, 11.01 per cent; ether soluble matter, 2.33 per cent.

The Biennial Report of the Inspection of Pharmacies, 1909-1910, states that colocynth extract does not always conform to the pharmacopœia, dissolving only incompletely in 70° alcohol.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 238; and J. Pharm. Anvers, 1911, v. 67, p. 562.

CONDURANGO.

Linke, H., calls attention to a statement made in the Hager-Fischer-Hartwich Commentary, to the effect that condurango no longer occupies the important position it did years ago, and on this account the drug now frequently comes into the market of inferior quality.—Ber. pharm. Gesellsch. 1911, v. 21, p. 543; see also pp. 188-189.

CONIUM.

Lloyd, John Uri, notes that Störck, of Vienna, about 1760 introduced conium into regular medicine, though it was probably known to the ancients as a poisonous plant.—Bull. Lloyd Libr 1911, No. 18, pp. 27-28.

Xrayser II contributes an interesting note on hemlock as a State poison.—Chem. & Drug. 1911, v. 79, p. 713; see also p. 764.

Mitlacher, Wilhelm, reports experiments in the cultivation of *Conium maculatum*. Only the herb was harvested, and this on drying was found to lose 80 per cent of its weight. The use of this drug is quite limited and its cultivation, therefore, will probably not be economically practicable.—Pharm. Post, 1911, v. 44, p. 213.

Dohme and Engelhardt express the belief that the assay method for conium should be revised. It is very cumbersome and could easily be replaced by a more expeditious process.—Am. J. Pharm. 1911, v. 83, p. 521.

Kimberly, C. H., reports the opinion that the method for assaying conium and its preparations is too complicated and tedious.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 160.

Vanderkleed, Chas. E., reports 2 assays of conium fruit; lowest 0.558 per cent, highest 0.718 per cent coniine; both above standard.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

An editorial (Lancet, 1911, v. 181, p. 1027), discussing hemlock as a State poison, states that Charles R. Marshall has recently confirmed

the opinion that Plato's account of the action of hemlock juice is correct.

The Council on Pharmacy and Chemistry of the A. M. A. reports the omission of coniine hydrobromide from N. N. R., because there appears to be no rational indication for its use and because it is held to be dangerous.—Rep. Council Pharm. & Chem. 1911, pp. 55-56.

Rabe, R. P., states that conium is indicated in cases of impotency or too early emission. Women with ungratified sexual feelings. Dry spot in throat, causes cough.—Hahnemann. Month. 1911, v. 46, p. 399.

CONVALLARIA.

Lloyd, John Uri, points out that lily of the valley is recorded as one of the earliest domestic remedies.—Bull. Lloyd Libr. 1911, No. 18, p. 28. See also Midl. Drug. 1911, v. 45, p. 175.

Wood, H. C., jr., reports that as there is no satisfactory method of chemical standardization for any of the drugs of the digitalis group the committee of the Philadelphia Branch of the American Pharmaceutical Association feels that the adoption of a physiologic method of assay for convallaria would be advisable.—J. Am. M. Assoc. 1911, v. 56, p. 606.

Smith, Kline & French Co. (Analytical Report, 1911, p. 48) reports on the physiological testing of convallaria.

Reichard, C., reviews the reactions of convallamarin and convallarin.—Pharm. Zentralh. 1911, v. 52, pp. 183-188.

The editor of the "Therapeutics" column (J. Am. M. Assoc. 1911, v. 56, p. 965) asserts that convallaria is of doubtful action on account of the varying strength of its official preparation.

Merck, E. (Ann. Rep. 1911, v. 25, Darmstadt, 1912, pp. 88-91), reviews the literature of convallamarin.

COPAIBA.

Lloyd, John Uri, discusses the origin of copaiba and the distribution of the plant yielding it and points out that the first explicit description and illustration of one of the trees yielding copaiba is to be found in the joint work of Piso and Marcgraf (1648).—Bull. Lloyd Libr. 1911, No. 18, pp. 28-31.

Linke, H., criticizes the Ph. Germ. V test for the presence of gurjun balsam in balsam of copaiba.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 284-285. See also Pharm. J. 1911, v. 86, p. 653.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 12-13) state that the Ph. Germ. V requirements for balsam of copaiba are still incomplete, and express doubt as to the corrections of the acid and saponification number of the official requirements.

Riedel's Berichte (1911, pp. 17-18) reports a study of balsam of copaiba and points out that for the adulteration of this drug, gurjun

balsam and rosin appear to be used most extensively. The Ph. Germ. V tests for balsam of copaiba are considered satisfactory because of the misinterpretation possible in connection with the tests for gurjun balsam and for rosin.

Gehe & Co. (*Handelsbericht*, 1911, p. 56) express the belief that the Ph. Germ. V modification of solubility requirements for copaiba in petroleum benzin is more nearly correct. The test for fatty oil and the Turner reaction for gurjun balsam are new additions and should prove satisfactory.

Parry, Ernest J., thinks that few monographs in the Ph. Brit. require greater revision than does that on copaiba. The adulterants to be specially guarded against are gurjun balsam and African copaiba, the latter the more dangerous. He gives values obtained from a large number of samples.—*Chem. & Drug*. 1911, v. 78, p. 378.

Caesar & Loretz (*Jahres-Bericht*, 1911, p. 86) discuss the valuation of balsam copaiba and present a table showing the limitations for the specific gravity of this drug included in the several pharmacopœias.

An unsigned note (*Chem. & Drug*. 1911, v. 79, p. 390) states that the exports of copaiba from Maracaibo (Venezuela) during 1910 amounted to 69,497 kilos valued at £7,189, against 59,139 kilos valued at £7,005 in 1909.

Schneider, A., points out that the Turner test for gurjun balsam has been included in the Ph. Germ. V, which authority also reincludes a test for fatty oils that requires three hours drying on a water bath.—*Pharm. Zentralh.* 1911, v. 52, p. 565.

Bernegau, L. H., reports that all of the 13 samples of copaiba examined were strictly U. S. P. They were tested for gurjun balsam by J. L. Turner's method, which has been adopted by the Ph. Germ. V.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 121.

McKeogh, Robert P., reports as the result of his examination of 10 samples of copaiba that it is largely adulterated with gurjun balsam, but not with fixed oils or turpentine. He considers the U. S. P. test for fixed oil to be useless, as copaiba with 20 per cent of fixed oil added failed to gelatinize with the amount of ether directed in the U. S. P.—*Apothecary*, April, 1911, v. 23, p. 28.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, pp. 25-28) report the examination of 45 samples of copaiba, having an acid value from 42 to 87, and a refractive index from 1.507 to 1.518, and yielding from 45 to 70 per cent of oil. They express the belief that in the new Ph. Brit. the sources of copaiba may be restricted by an alteration in the present limits of the specific gravity, from 0.916 to 0.993, to 0.966 to 0.995.

Southall Bros. & Barclay (*Rep.* 1911, Birmingham, 1912, p. 11) report that not one of the 11 samples of copaiba tested during the year has shown any indication of the presence of gurjun oil or balsam.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that copaiba balsam is constantly found adulterated with gurjun balsam.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 228; and J. Pharm. Anvers, 1911, v. 67, p. 517.

CORIANDRUM.

Lloyd, John Uri, points out that coriander was mentioned by early Sanscrit writers and in the Mosaic books, Exodus and Numbers, and occurs in the famous Egyptian papyrus Ebers.—Bull. Lloyd Libr. 1911, No. 18, p. 31.

Tunmann, O., in discussing the drug trade of Hamburg, states that the chief supplies of coriander come from Russia, Morocco, Holland, Hungary, and Mähren.—Apoth.-Ztg. 1911, v. 26, p. 378.

Schimmel & Co. (Semi-Annual Report, Oct., 1911, p. 39) state that the coriander crop in Russia has been practically a failure, only from 70,000 to 80,000 kilos having been gathered. See also Heinrich Haensel (Bericht, Oct.-Apr., 1910-11, p. 18).

Kremers, Edward, reports experiments in bleaching coriander with sulphurous acid.—Proc. Wisconsin Pharm. Assoc. 1911, p. 31.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 11) report that 3 batches of the powdered seeds of coriander yielded from 5.82 to 7.19 per cent of ash.

Umney and Bennett think that an ash limit of 6 per cent is as high as one need go, whilst the average of fair fruits is as a rule below 5 per cent.—Pharm. J. 1911, v. 86, p. 597. See also Chem. & Drug. 1911, v. 78, p. 674; and Drug Topics, 1911, v. 26, p. 148.

CREOSOTUM.

Sage, C. Edward, makes suggestions for a uniform method of testing creosote.—Pharm. J. 1911, v. 86, p. 595. Also Chem. Eng. 1911, v. 14, pp. 338-342, and J. Soc. Chem. Ind. 1911, v. 30, pp. 588-594.

Fernau, Albert, discusses the identification of creosote and of guaicol carbonate.—Ztschr. allg. österr. Apoth.-Ver. 1911, v. 49, p. 165.

Bernegau, L. H., reports that it is somewhat difficult to get creosote which meets all U. S. P. requirements. Of 6 samples examined, 3 were strictly U. S. P., 2 were slightly below the required 1.078 specific gravity, 1 gave evidence of small traces of caeruleignol, and 1 was not properly soluble in acetic acid.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 121.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 29) report on 14 samples of beechwood creosote, the specific gravity of which varied from 1.079 to 1.083 and the refractive index from 1.5365 to 1.5394.

The Biennial Report of the Inspection of Pharmacies, 1909-10, notes that there is sold as creosote for use in dental caries a product

consisting chiefly of phenic acid, the officinal creosote is not always of the required specific gravity.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 235; also J. Pharm. Anvers, 1911, v. 67, p. 523.

Wood, Horatio C., jr., in an article on the possibility of intestinal antiseptics, calls attention to the evident limitations of this use of creosote.—Therap. Gaz. 1911, v. 35, pp. 153–156.

Robinson, Beverley, thinks that one of the most important things to be constantly borne in mind in the prophylaxis and treatment of pneumonia is the proper and efficient use of beechwood creosote by means of inhalation.—N. York M. J. 1911, v. 93, p. 273.

Paris, M., reports the successful treatment of verminous bronchopneumonia in cattle by means of Malkmus' spray: creosote 410, alcohol 40, distilled water 40.—Vet. J. 1911, v. 67, p. 442.

CRESOL.

Düsterbehn, F., notes that the Ph. Germ. V now requires 50 per cent of *m*-cresol in the official article which is described as a clear yellowish or slightly yellowish brown liquid that gradually becomes darker on keeping. The description also contains a method for quantitatively determining the *m*-cresol content.—Apoth.-Ztg. 1911, v. 26, p. 172. See also Pharm. J. 1911, v. 86, pp. 653, 654.

An unsigned report (Chem. Ind. 1911, v. 34, p. 718) reviews the production of coal tar and related products in the United States during the year 1910.

Zincke and Brune report observations on sulphur derivatives of *o*- and *p*-cresol.—Ber. deutsch. chem. Gesellsch. 1911, v. 44, pp. 185–202, 413–424.

Ditz and Bardach discuss the estimation of phenol and *p*-cresol in mixtures containing them.—Biochem. Ztschr. 1911, v. 37, pp. 272–312.

Zincke, Frohneberg, and Kempf report observations on the action of bromine and chlorine on the phenols, and discuss sulphur containing pseudobromide of *p*-cresol and its decomposition products.—Ann. Chem. 1910, v. 381, pp. 28–51.

Raschig, F., in German patent 232,071, discusses the production of *p*-chlor-*m*-cresol from a mixture of *m*- and *p*-cresol with subsequent distillation.—Pharm. Ztg. 1911, v. 56, p. 375.

Vanderkleed, C. E., reports that in order to establish the practical value of the U. S. P. requirements for cresol, the firm with which he is connected has recently inaugurated the routine testing of all lots of cresol for bactericidal power by the Hygienic Laboratory method, as described by Anderson and McClintic in the "Journal of Infectious Diseases," Jan. 3, 1911. Three lots gave the following phenol coefficient, 3.46, 3.235, 3.41, this figure expressing the bactericidal power as compared with that of pure crystallized phenol, which is taken as 1.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 122.

Smith, Kline & French Co. (Analytical Report, 1911, p. 19) reports on 20 samples of cresol. Two samples were rejected on account of their dark color. Seven did not meet the U. S. P. requirements in regard to specific gravity, ranging from 1.030 to 1.039.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that under the name of cresol a great variety of products were found, often mixtures of more or less considerable quantities of indifferent hydrocarbons. Sometimes they are tar products from which all the phenols have been completely extracted. Sometimes, again, they are sulphone derivatives of empyreumatic hydrocarbons.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 233, and J. Pharm. Anvers, 1911, v. 67, p. 522.

Raschig, F., discusses the Ph. Germ. V test for compound solution of cresol, and points out that the opalescence occurring on the addition of 3 drops of the compound solution of cresol to 6 cc. of a 1 per cent solution of sodium chloride is not due to the presence of hydrocarbons, but to meta-cresol, of which the official cresol contains an appreciable quantity.—Pharm. Ztg. 1911, v. 56, p. 180.

A contributor to "Notes and Queries" (Drug. Circ. 1911, v. 55, p. 642) outlines a method for making compound solution of cresol and recommends that the linseed oil used be previously warmed in a capacious casserole, or a deep earthen jar.

Berkowitz, Morris E., discusses the making of compound solution of cresol.—Drug. Circ. 1911, v. 55, pp. 419-420.

Thomann comments on the quantitative estimation of phenols in bodies dead from lysol poisoning.—Schweiz. Wehnschr. Chem. u. Pharm. 1911, v. 49, pp. 121-122.

ORETA PRÆPARATA.

An editorial (Therap. Gaz. 1911, v. 35, pp. 801-802) calls attention to a paper by Mitchell on the use of chalk paste consisting of equal parts of chalk and petrolatum as a substitute for bismuth paste.

OROCUS.

An editorial note (Suedd. Apoth.-Ztg. 1911, v. 51, p. 533) deals with the history of saffron.

Hartwich, C., in commenting on the limit of color (1:100,000) prescribed by the Ph. Germ. V, states that the Ph. Austr. requires 1:300,000 and the Ph. Helv. even a limit of 1:1,000,000. The latter requirement has more recently been endorsed by Caesar & Loretz, the originators of the requirement for limit of color.—Apoth.-Ztg. 1911, v. 26, p. 7.

An unsigned review of volume 1 of Ernest J. Parry's work on food and drugs points out that saffron is a much maligned article, and although it was at one time very much adulterated, yet at present

it is difficult to get a record of any bad parcels of the drug.—Brit. & Col. Drug. 1911, v. 60, p. 471.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 97-99) discuss the valuation of saffron and present a table showing the limitations for water and for ash included in the several pharmacopœias.

Rusby, H. H., states that it is safe to say that at the present time it is as rare an occurrence to see an importation of saffron that is defective in any way as it used to be to see a perfect one.—Oil, Paint, and Drug Reporter, 1911, v. 80, November 20, p. 28K.

Kebler, L. F., states that no product has presented more difficulties than saffron. This article has been most liberally adulterated in the past with various substances.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 21.

Vanderkleed, C. E., reports that the committee on unofficial standards of the American Pharmaceutical Association has adopted a monograph on saffron, in which the allowable percentage of styles among the stigmas has been fixed at 10 per cent.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 129.

An editorial (Bull. Am. Pharm. Assoc. 1911, v. 6, p. 5) endorses the suggestion that the U. S. P. permit the presence of 10 per cent of foreign materials in saffron.

Masson, P., presents a note on saffron in histologic technique.—Compt. rend. Soc. Biol. 1911, v. 70, p. 573.

Smith, Kline & French Co. (Analytical Report, 1911, pp. 39-40) report that they would consider 5 per cent of styles an allowable proportion, but the task of getting a representative sample from a lot and determining the proportion is not easily done. See also Proc. Pennsylvania Pharm. Assoc. 1911, pp. 128-129, and Bull. Am. Pharm. Assoc. 1911, v. 6, p. 347.

Whitney, D. V., reports a sample of saffron, labeled true Spanish, which was found to contain 50 per cent twisted petals, evidently stained.—Proc. Missouri Pharm. Assoc. 1911, p. 96.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 61) report that out of several samples of saffron examined 3 were heavily adulterated in a very crude way with sodium potassium tartrate.

"D. B." reports that, according to W. Mitlacher, the flowers of *Calendula officinalis*, of *Carthamus tinctorius*, and the pollen tubes of crocus are much employed in the adulteration of crocus. Moreover, mineral substances are added to increase the weight, and it is colored.—Bull. sc. pharmacol. 1911, v. 18, Annexes, p. 9.

The Biennial Report of the Inspection of Pharmacies, 1909-1910, states that crocus was found frequently to be a mixture of styles and stigmas. Moreover, the tincture of crocus and laudanum does not always have the coloring power desired. Sometimes crocus is found charged with tartar borate and giving 20 per cent of ash.—Bull. Soc.

roy. pharm. Brux. 1911, v. 55, p. 231, and J. Pharm. Anvers, 1911, v. 67, p. 519.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 3) recommends that tincture of saffron be made with 45 per cent alcohol. See also Pharm. J. 1911, v. 87, p. 847.

Rabe, R. P., states that crocus sativa is indicated in cases of sensation of something alive in abdomen.—Hahnemann. Month. 1911, v. 46, p. 399.

CUBEBA.

Lloyd, John Uri, points out that Masudi in the Tenth Century referred to cubeb as a product of Java and toward the end of the Thirteenth Century this drug was known to European countries generally.—Bull. Lloyd Libr. 1911, No. 18, p. 34.

Hartwich, C., in discussing the Ph. Germ. V requirements for cubeb, states that the description as a stone fruit is perhaps not permissible, as many at least of the varieties of *Piper* have a fruit that is to be considered as a berry.—Apoth.-Ztg. 1911, v. 26, p. 7. See also Pharm. J. 1911, v. 86, p. 653.

Schimmel & Co. (Semi-Annual Report, October, 1911, p. 39) report that the cubeb market is still controlled by the United States, and the prospects continue to be firm, as all parcels which are being offered for sale realize full prices.

Tunmann, O., in a review of the drug trade of Hamburg, points out that the cubeb shrub is being extensively cultivated, usually in coffee plantations, in the southern portion of the island of Sumatra and the northwestern section of Java.—Apoth.-Ztg. 1911, v. 26, p. 378.

Wiley, H. W., reports cubeb containing an excess of stems and immature and inferior berries.—Ann. Rep. U. S. Dept. Agric. 1911, 1912, pp. 424, 430.

Rusby, H. H., asserts that cubeb, which frequently contains 25 per cent or more of stalks, should be limited to 5 per cent.—Pharm. Era, 1911, v. 44, p. 95. See also Midl. Drug. 1911, v. 45, p. 344, and Oil, Paint, and Drug Reporter, 1911, v. 80, November 20, p. 28K.

Kebler, L. F., states that an admixture of 10 per cent of fruit, which is neither fully grown nor sound in every particular, is serving as a working basis for the officials entrusted with the enforcement of the Federal food and drugs act.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 20.

An editorial (*Ibid.* p. 5) endorses the suggestion that the U. S. P. permit the presence of 10 per cent of stems, twigs, and not fully grown fruit in cubeb berries.

Mansfield, William, reports on a number of naturally occurring cubeb substitutes and presents illustrations of transverse sections of so-called cubeb stalks and of powdered cubeb stalks.—Proc. New York Pharm. Assoc. 1911, pp. 248–253. Also Pharm. Era, 1911, v. 44, p. 338.

Rosenthaler, L., calls attention to and describes the crystals obtained from cubeb by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, p. 345.

Dohme and Engelhardt think that an estimation of and requirements for the percentage of oleoresin should be given. Cubeb varies considerably in the amount of oleoresin.—Am. J. Pharm. 1911, v. 83, p. 521.

Vanderkleed, Chas. E., reports 1 assay of cubeb; 22.14 per cent oleoresin; above standard.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

Schneider, Albert, reports on 3 samples of cubeb, one of which was adulterated with inferior fruits and refuse.—Pacific Pharm. 1911, v. 5, p. 179.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 12) report that the ash content of 3 samples of powdered cubeb varied from 4.63 to 5.00 per cent.

Robinson, Beverley, states that in throat disorders of acute nature freshly powdered cubeb taken frequently and in moderate amount dry on the tongue, has been of more service to him than any other drug.—Critic and Guide, 1911, v. 14, p. 337.

CUPRI SULPHAS.

Murray, B. L., points out that, under copper sulphate, the U. S. P. seems to recognize only "large crystals"; powder, granular, and small crystals of the trade are not mentioned.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 13.

Düsterbehn, F., points out that the Ph. Germ. V considers copper sulphate as being nearly insoluble in alcohol and limits the content of alkali or other salts to 0.5 per cent.—Apoth.-Ztg. 1911, v. 26, p. 172.

Gouthière & Co. and Ducancel (Fr. Pat. 427,893, June 7, 1910) describe a process of manufacturing copper sulphate from cement copper and precipitated sulphur.—J. Soc. Chem. Ind. 1911, v. 30, p. 1211.

The Biennial Report of the Inspection of Pharmacies, 1909-10, notes that there is sold in the drug stores as copper sulphate a mixture of copper and iron sulphate. It sometimes contains so little true copper sulphate as to possess none of the principles for which it is employed.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 234, and J. Pharm. Anvers, 1911, v. 67, p. 522.

Tankard, A. R., in a discussion of the purity of foods and drugs, states that copper sulphate is an actively deleterious, mineral addition, and its use in foods should, in his opinion, be prohibited by law.—Pharm. J. 1911, v. 87, p. 5.

Wood, Horatio C., Jr., in an article on the possibility of intestinal antiseptis, calls attention to the evident limitations of this use of copper sulphate.—*Therap. Gaz.* 1911, v. 35, pp. 153–156.

CUSO.

Lloyd, John Uri, states that the use of cusso as a vermifuge was derived from Abyssinian domestic practice. It was introduced into Europe about 1850 by a Frenchman.—*Bull. Lloyd Libr.* 1911, No. 18, p. 34.

Hartwich, C., points out that the Ph. Germ. V now includes a limitation of pollen grains, indicating the presence of the male flower.—*Apoth.-Ztg.* 1911, v. 26, p. 7; see also pp. 136–137.

An unsigned review of the Ph. Germ. V (*Pharm. J.* 1911, v. 86, p. 653) notes that an ash limit of 9 per cent is introduced for the powder.

Luftensteiner, Hans, discusses the nature of cusso and its constituents.—*Pharm. Prax.* 1911, v. 10, pp. 130–131.

"D. B." reports that, according to W. Mitlacher, the Austrian inspection of pharmacies found that cusso flowers frequently contained male flowers. The presence of numerous grains of pollen in the powder permits the detection of this falsification.—*Bull. sc. pharmacol.* 1911, v. 18, Annexes, p. 9.

The Biennial Report of the Inspection of Pharmacies, 1909–10, states that the flowers of cusso are mixed with sweepings.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 229, and *J. Pharm. Anvers*, 1911, v. 67, p. 518.

Rosenthaler, L., describes and illustrates the nature of the material obtained from cusso by pyroanalysis.—*Ber. pharm. Gesellsch.* 1911, v. 21, p. 532.

Wood, H. C., Jr., calls the attention of the Committee of Revision to Brüning's method (*Ztschr. expr. Pharm. u. Therap.* 1906, v. 3, pp. 564–587) by determining the vermifugal effect on the intestinal worms obtained from the alimentary tract of dogs and cats. Though unaware of any application of the method, and there being insufficient time for experimental work, the Committee was not inclined to recommend the introduction of a physiologic test for this drug.—*J. Am. M. Assoc.* 1911, v. 56, p. 606.

CYPRIPEDIUM.

Lloyd, John Uri, states that cypripedium has been valued as a domestic remedy and was once a home favorite in the form of a decoction for nervous conditions of women and children. It was thus utilized by the early settlers as a substitute for valerian.—*Bull. Lloyd Libr.* 1911, No. 18, p. 34.

Rusby, H. H., is of the opinion that a considerable quantity of *Cypripedium acaule* is collected and sold for the official article. It is probably of equal value and, before incorporating differential characters into the Pharmacopœia, this question should be settled.—Pharm. Era, 1911, v. 44, p. 94.

Rabe, R. P., states that cypripedium is indicated in cases of sleeplessness of children.—Hahnemann. Month. 1911, v. 46, p. 399.

An unsigned "Therap. Nugget" states that the sphere of remedial action possessed by cypripedium is not wide. It acts upon the cerebrospinal system, upon the gray nerve tissue, and is useful for the effects of mental overexertion or reflex nervous excitement.—J. Therap. & Diet. 1911, v. 5, p. 96.

DECOCTA.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 631) points out that it is distinctly required that decoctions and infusions are to be prepared fresh each time.

DIACETYL-MORPHINE.

Heubner, in a review of the Ph. Germ. V, expresses the belief that heroin can hardly be accepted as an improvement on morphine and should not be honored by official recognition. Its toxic nature is recognized in the comparatively small maximum dosage permitted.—Therap. Monatsh. 1911, v. 25, p. 295.

Kahn, Joseph, discusses the relation of morphine and heroin, and outlines Denigès's test of identity for heroin.—Proc. New York Pharm. Assoc. 1911, p. 66.

Kobert is reported as expressing the belief that heroin is a questionable substitute for codeine and is at least 20 times as toxic.—Pharm. Ztg. 1911, v. 56, p. 381.

Brooks and Mixell (N. Y. State J. M. Aug.) report two cases of heroin habituation.—J. Am. M. Assoc. 1911, v. 57, p. 1008.

Duhem, P. (Progrès méd. 1907, No. 8), asserts that heroin is not only no less toxic than morphine, but the symptoms which appear in heroinomaniacs, such as weakness, prostration, leaden complexion, etc., are more marked than is the case in morphinomaniacs.—Merck's Ann. Rep. 1911, v. 25, p. 262.

DIACETYL-MORPHINE HYDROCHLORIDE.

Düsterbehn, F., notes that diacetylmorphine hydrochloride is described by the Ph. Germ. V as a white crystalline, odorless, bitter tasting powder, readily soluble in water and difficultly soluble in alcohol and insoluble in ether. The salt melts at about 230°.—Apoth.-Ztg. 1911, v. 26, p. 173. See also Pharm. J. 1911, v. 86, p. 581.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 36) report that heroin hydrochloride may be assayed in tablets, etc., by precipitation with ammonia in an aqueous solution and shaking out with chloroform, evaporating, adding excess N/10 acid, and back titrating with N/20 NaOH, using cochineal as the indicator.

DIASTASE.

Craig, Hugh, reports the opinion that diastase is used very little, and a pure article is obtained with difficulty.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 607.

Smith, Kline & French Co. (Analytical Report, 1911, p. 19) reports that 9 samples of diastase were found capable of digesting from 50 to 100 times their weight of starch in one hour.

DIGITALIS.

Lloyd, John Uri, states that digitalis was investigated in 1776 by Withering, through whose efforts it was introduced into licensed medicine, though it had long been used in domestic practice.—Bull. Lloyd Libr. 1911, No. 18, p. 35. Also Eclectic Med. Glean. 1911, v. 7, p. 407.

Henkel, Alice, describes and illustrates foxglove, *Digitalis purpurea* L., also gives synonyms, other common names, the habitat and range, and data on the collection, prices, and uses.—Bull. Bur. Plant Ind. U. S. Dept. Agric. 1911, No. 219, pp. 32–33.

True, R. H., reports on experiments in the cultivation of digitalis and points out that this plant, to meet the official requirements, takes two years' use of the ground. He expresses the hope that the first year's leaves will be recognized as being equal to the second year's leaves.—Proc. N. W. D. A. 1911, p. 177.

Mitlacher, Wilhelm, reports that of the seeds sown but few develop and the resulting plants are not always satisfactory.—Pharm. Post, 1911, v. 44, p. 214.

Miller, Adolph W., reports that, in the middle of August, London reported that the intense heat had damaged the fields so that probably there would be no second crop of digitalis this year.—Proc. N. W. D. A. 1911, p. 91.

Hartwich, C., in a review of the Ph. Germ. V requirements, points out that by inference one is lead to think that digitalis leaves may at times have two palisade layers of cells. A careful study of a number of sections has failed to show more than one layer.—Apoth.-Ztg. 1911, v. 26, p. 14.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 30–31) discuss the available supply of digitalis leaf, and express regret that the Ph. Germ. V did not include a physiological method for testing this drug.

Rusby, H. H., notes that increasing doubt is being cast upon the claim that a second year leaf is in any way superior to that of the

first year.—Oil, Paint, and Drug Reporter, 1911, v. 80, November 20, p. 28K. See also Pharm. Era, 1911, v. 44, p. 141.

Plaut, Albert, asserts that he himself could not tell first year digitalis from second year digitalis, and doubts if any one else could.—Pharm. Era, 1911, v. 44, p. 12.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for 4 samples of digitalis: Water content, 2.23 to 13.48 per cent; ash content, 7.52 to 12.55 per cent; alkalinity of water soluble ash, 3.12 to 4.80 per cent; total alkalinity of ash, 7.29 to 8.10 per cent.—Proc. Ohio Pharm. Assoc. 1911, p. 70.

Kraemer, Henry, reports, with illustrations, some variations in the forms of digitalis hairs.—Am. J. Pharm. 1911, v. 83, pp. 365-370. Also Proc. Pennsylvania Pharm. Assoc. 1911, pp. 292-298.

Burmann, James, reports on the presence of manganese in digitalis. Schweiz. Wehnschr. Chem. u. Pharm. 1911, v. 49, pp. 562-563. Also Bull. Soc. chim. France, 1911, v. 9, pp. 957-959.

Wood, H. C., jr., reports that, as there is no satisfactory method of chemical standardization for any of the drugs of the digitalis group, a physiologic method of assay would be advisable. The following is suggested: Digitalis should be of such strength that when tested in the manner described it shall require not less than 0.35 mg. nor more than 0.40 mg. per gramme of body weight to kill a guinea pig in twelve hours. The method of assay is outlined.—J. Am. M. Assoc. 1911, v. 56, p. 606. See also Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 24-26.

Hale, Worth, reports observations on the standardization of digitalis and the variability of the crude drug and of medicinal preparations.—Bull. No. 74, Hyg. Lab. U. S. P. H. & M.-H. S. 1911, pp. 55.

Houghton, E. M., in a discussion on the physiological testing of drugs, proposes the use of strophanthin (Kombe) C. P., crystalline, as a stable, satisfactory, chemical standard by which to measure the value of the heart tonics of the digitalis series.—Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 179-180.

Eckler, C. R., reports some experiments with the cat method for testing digitalis and its allies. He thinks the cat method is unquestionably the most complicated and difficult of all of the American methods.—Am. J. Pharm. 1911, v. 83, pp. 478-491.

Hale, Worth, discussing the biological standardization of drugs, expresses the belief that the Famulener and Lyons frog heart method is the preferable one for digitalis because it is based on sound physiological facts as well as experimental evidence. *Ibid.* p. 106.

Githens, T. Stotesbury, objects to the use of frogs for physiological work on the heart tonics of the digitalis series, as leading to variable results, and recommends the use of guinea pigs.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 180.

Haskell, Charles C., discusses physiological methods for the standardization of digitalis and concludes (1) that the variations in the

reaction of frogs can be nullified by the use of ouabain as a standard; (2) that it has certainly not been proved that guinea pigs possess any marked advantages, as experimental animals for testing digitalis, over frogs; (3) that lethal dose methods are unsafe, while the one hour frog heart method is both a qualitative and quantitative test for the heart tonics.—*Am. J. Pharm.* 1911, v. 83, pp. 201–211.

Focke, in a contribution on the standardization of digitalis, reports observations on the variability in the resistance of frogs to digitalis.—*Ztschr. exper. Path. u. Therap.* 1911, v. 9, pp. 97–102.

Hale, Worth, in commenting on the seasonal and sex variations of *Rana pipiens* to digitalis, states that it has been his experience that this animal does not vary in reaction over 10 per cent, the limit of accuracy of the method.—*J. Pharmacol. & Exper. Therap.* 1911–1912, v. 3, pp. 458–459.

Focke discusses some additional findings in the physiological testing of digitalis leaves and concludes that his use of a 10 per cent infusion is fully justified, despite the fact that approximately 11 per cent of the constituents of digitalis remain in the leaves.—*Arch. Pharm.* 1911, v. 249, pp. 323–328.

Burmman, James, discusses the physiological valuation of digitalis preparations according to the method proposed by Focke.—*Schweiz. Wchnschr. Chem. u. Pharm.* 1911, v. 49, pp. 218–221.

Focke comments on the article by Burmann.—*Schweiz. Wchnschr. Chem. u. Pharm.* 1911, v. 49, pp. 325–327. See also pp. 416–418, and *Pharm. Ztg.* 1911, v. 56, p. 858.

Riedel's *Berichte* (1911, p. 474) quotes W. Straub, who emphasizes the importance of the physiological valuation of drugs, particularly of digitalis, despite the fact that pharmaceutical chemists do not appear to be impressed by the subject.

Hale, Worth, reports observations on the effect of the digestive secretions on the activity of digitalis and allied drugs.—*Tr. Am. M. Assoc. Sec. Pharm. & Therap.* 1911, pp. 200–207. Also *J. Am. M. Assoc.* 1911, v. 57, pp. 1515–1517.

Sharp and Lancaster discuss some points as to the time of gathering the leaves, and the keeping properties, standardization of the tinctures, etc.—*Pharm. J.* 1911, v. 86, p. 102. See also editorial, *Ibid.* p. 90, and pp. 107, 164, 230.

Wiley, H. W., reports digitalis of a poor quality and unfit for medicinal use.—*Ann. Rep. U. S. Dept. Agric.* 1911, 1912, p. 424.

Schneider, Albert, reports on 3 samples of digitalis, one of which was adulterated, consisting of musty old worthless material.—*Pacific Pharm.* 1911, v. 5, p. 177.

Sharp, Gordon, reports that a sample of digitalis leaves, 8 years old and carefully preserved, was found to be rather more active than the average commercial leaves, probably owing to the circumstance that they were very dry.—*Pharm. J.* 1911, v. 86, p. 230.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that digitalis leaves are not harvested in accordance with pharmacopœial requirements.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 229. Also J. Pharm. Anvers, 1911, v. 67, p. 517.

Burmman, James, discusses the nature of the several constituents found in digitalis and outlines a method for separating digitoxin.—Schweiz. Wehnschr. Chem. u. Pharm. 1911, v. 49, pp. 33-38.

Vanderkleed, Chas. E., reports 14 assays of digitalis leaf, lowest 0.205 per cent, highest 0.430 per cent digitoxin; 13 above and 1 below standard.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

Wilson, J. Beetham, asserts that indiscriminately picked and carelessly dried leaves are the main causes of inert, or practically inert, preparations of digitalis.—Pharm. J. 1911, v. 86, p. 294.

Kraft, F., discusses the glucosides of the leaves of *Digitalis purpurea*. He includes digitalisin, gitalin, anhydrogitalin, digitoxin, digitalinum verum, digitonin, and digitosaponin.—Schweiz. Wehnschr. Chem. u. Pharm. 1911, v. 49, pp. 161-165, 137-176.

Merck, E. (Ann. Rep. 1911, Darmstadt, 1912, v. 25, pp. 31-75), discusses the digitalis glucosides and allied drugs, with a review of the literature.

An editorial note (Pharm. J. 1911, v. 86, p. 428) calls attention to the confusion as to just which preparation is meant when digitalin is ordered in a prescription.

An editorial (Am. Druggist, 1911, v. 58, p. 243) discusses the nature of digitalin, and points out that there are at least four distinct articles in commerce known as digitalin:

1. Digitalin cryst. (German) = digitonin.
2. Digitalin cryst. (French) = digitoxin.
3. Digitalin pur. amorph., a yellowish brown amorphous powder, soluble in chloroform, insoluble in water, which is now shown to be a mixture of digitalin and digitoxin.
4. Digitalin pur. amorph. Germanicum, an amorphous yellowish white powder, soluble in water, insoluble in chloroform, which gives the reactions for true digitalin, and is apparently a mixture of this body with digitonin.

The Council on Pharmacy and Chemistry of the A. M. A. reports the omission of digitonin from N. N. R., because of the unfortunate confusion regarding the nomenclature of the digitalis products.—Rep. Council Pharm. & Chem. 1911, pp. 56-57.

Coblentz, Virgil, reports that the physiological assay of such drugs as digitalis and strophanthus, dispensed in various pharmacies in New York City, demonstrated a very wide variation in their relative potency.—J. Ind. & Eng. Chem. 1911, v. 3, p. 540.

Lascoff, J. Leon, presents a paper on the infusion of digitalis.—Pract. Drug. 1911, v. 29, October, p. 35. See also Utech, P. Henry, Bull. Pharm. 1911, v. 25, p. 369; and Drug Topics, 1911, v. 26, p. 278.

Hommell, P. E., presents an improved formula for the infusion of digitalis in which he suggests the use of aromatic water in place of cinnamon water. He also adds 5 per cent of glycerin to improve the taste.—*Merck's Rep.* 1911, v. 20, p. 154.

Wurdack, J. H., thinks that the present U. S. P. formula for infusion of digitalis is correct, and that 10 per cent of alcohol is necessary in order to insure its keeping qualities while being used by the patient.—*Bull. Am. pharm. Assoc.* 1911, v. 6, p. 700.

Hirohashi, S., reports studies on the estimation of the physiological effects of digitalis, and states that the strained infusion was invariably found to be more active than the corresponding infusion filtered through paper.—*J. Pharm. Soc. Japan*, 1911, July, p. 443.

The Committee of Reference in Pharmacy (Third Report, Suppl., p. 4) recommends that tincture of digitalis be made with 10 per cent w/v of the leaves and with 70 per cent alcohol, in approximate conformity with the International Agreement. See also *Pharm. J.* 1911, v. 87, p. 487.

La Pierre, E. H. (Apothecary), discusses the making of a fat free tincture of digitalis, the fat and wax being removed by a preliminary percolation with a naphtha that leaves a minimum amount of odor on evaporation.—*Drug Topics*, 1911, v. 26, p. 58.

Sayre, L. E., reports that 6 samples of tincture of digitalis out of 8 samples examined were distinctly inferior to a standard sample in extract content and varied from 38.75 to 55 per cent alcohol.—*Bull. Kansas Bd. Health*, 1911, v. 7, p. 139.

The A. Ph. A. Committee on Drug Market reports finding 10 samples of tincture of digitalis to give from 1.08 to 3.45 per cent of extractive, and from 23.9 to 40.3 per cent of alcohol.—*Drug Topics*, 1911, v. 26, p. 275.

Craig, Hugh, reports the opinion that extract of digitalis is more stable than the crude drug, besides being much used.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 608.

Merck, E., reviews the recent literature on preparations of digitalis.—*Ann. Rep.* 1911, v. 25, pp. 213-220.

An editorial (*Lancet*, 1911, v. 181, p. 956) reviews some of the literature on digitalis in heart disease, from Withering (1778) to James Mackenzie (Heart, 1911).

An unsigned note (*J. Am. M. Assoc.* 1911, v. 56, p. 1211) on Eighteenth Century materia medica quotes some of the therapy of Herman Boerhaave with reference to digitalis.

Cushny, Arthur R., discusses the therapeutics of digitalis and its allies. He comments on the small amount of accurate knowledge that we possess as to practical therapeutics and thinks there is no field in which painstaking work is more required.—*Am. J. M. Sc.* 1911, v. 141, pp. 469-485. See also pp. 826-837.

Focke discusses the question of cumulation of digitalis action and suggests that previous use of digitalis be inquired into.—*Therap. Monatsh.* 1911, v. 25, pp. 533–536.

Edens, E., reports observations on the influence of digitalis on irregularities of the heart's action.—*Therap. Monatsh.* 1911, v. 25, pp. 1–9.

La Franca, S., discusses the action of the heart tonic remedies according to new theories of the general physiology of the heart.—*Ztschr. exper. Path. u. Therap.* 1911, v. 9, pp. 427–442.

Epstein, E. M., reviews the pharmacodynamics of digitalis according to contemporary authors.—*Am. J. Clin. Med.* 1911, v. 18, pp. 417–419.

Gelbart, Moses, discusses the influence of digitalis on recent valvular lesions.—*Arch. exper. Path. u. Pharmakol.* 1910–11, v. 64, pp. 167–182.

Hernando discusses the influence of the constituents of the digitalis group on the blood pressure of rabbits.—*Ibid.* 1911, v. 66, pp. 118–131.

Meyer, Erich, discussing the use of diuretics, reports his practical experience with the use of digitalis.—*Therap. Monatsh.* 1911, v. 25, p. 13.

Hewlett, Albion Walter, discussing the relation of cardiac irregularities to treatment, notes that partial heart block has frequently been produced in susceptible individuals by drugs of the digitalis series.—*J. Am. M. Assoc.* 1911, v. 57, pp. 1512–1514.

Holste, Arnold, discusses the determination and pharmacological action of the leaves of *Digitalis purpurea*, and reports comparative results of three successive examinations of the same leaves.—*Arch. exper. Path. u. Pharmakol.* 1911, v. 66, pp. 161–170.

Joannin discusses the therapeutic value of commercial and powdered digitalis and the determination of its toxic value.—*J. Pharm. et Chim.* 1911, v. 3, p. 33. For discussion see p. 86.

Choay, E., presents a note on the action of old powdered digitalis on hydrogen dioxide.—*Ibid.* pp. 343–345.

Additional references on the chemistry, pharmacology, and therapeutic uses of digitalis will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Zentralbl. Biochem. u. Biophysik*; and *Chem. Centralbl.*

ELASTICA.

Gardner, Hermann C. T., criticizes the Ph. Brit. monograph on caoutchouc, and suggests a simple method for the quantitative examination of rubber.—*Chem. & Drug.* 1911, v. 79, p. 386.

Lewis & Peat are quoted as authority for the statement that the world's rubber production for 1910 was 80,000 tons, against 75,000 in 1909.—*Cons. & Tr. Rep.* Feb. 8, 1911, p. 522.

Berkhout, A. H., reports a visit to the rubber producing countries of the world.—*Tropenpflanzer*, 1911, v. 15, pp. 148–154, 202–212, 264–270, 436–446.

Schidrowitz, Philip, describes the International Rubber Exhibition in London.—*Chem. Ind.* 1911, v. 34, pp. 544–546. See also *Tropenpflanzer*, 1911, v. 15, pp. 407–413 and 525–549.

Stern, Ernst, presents a review of the scientific progress in the problems of the chemistry and industry of rubber.—*Fortschr. Chem.* 1911, v. 4, pp. 329–340.

Barrows, Frank E., presents a review of the literature on synthetic caoutchouc.—*Chem. Eng.* 1911, v. 14, pp. 355–362.

An editorial (*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 279–284) discusses the synthesis of india rubber and the chemistry of this substance.

Hübener, G., reviews some of the recent literature relating to the chemistry and technology of rubber appearing during the years 1905–1910.—*Chem. Ztg.* 1911, v. 35, pp. 469 ff.

Stadden, Richard M., reports from Manzanillo, Mexico, the discovery of several new rubber producing plants in that district.—*Cons. & Tr. Rep.* Jan. 31, 1911, p. 405.

Kilmer, Fred B., asserts that india rubber may be regarded as neutral toward such drugs as are usually applied in plaster form.—*Proc. Virginia Pharm. Assoc.* 1911, p. 112.

Additional references on the chemistry, cultivation, and uses of rubber will be found in *Chem. Abstr.*; *Exper. Sta. Rec.*; *J. Soc. Chem. Ind.*; *J. Agric. trop.*; *Ztschr. Unters. Nahr. u. Genussm.*; and *Chem. Centralbl.*

ELATERINUM.

Lloyd, John Uri, states that the method of preparing elaterium, as described by Dioscorides, is practically that of the present day. The drug has been empirically known, from the earliest times to the natives of the countries it inhabits.—*Bull. Lloyd Libr.* 1911, No. 18, p. 35.

Power, F. B., reports that the best English elaterium was found to consist of 60 to 80 per cent of a nonpurgative substance and of from 20 to 40 per cent of a substance of apparently the same percentage composition, but dextrorotary and strongly purgative. Crystallized elaterin of commerce was found to be similarly variable in composition and action.—*Chem. & Drug. Australas.* 1911, v. 26, p. 59.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p 30) report that 1 sample of elaterium, having a normal appearance, contained 18.5 per cent of elaterin. 48.65 per cent of the sample was soluble in alcohol.

An editorial (*Eclectic Med. Glean.* 1911, v. 7, pp. 190-192) quotes John King as stating that elaterium is a specific in chronic cystitis and in chronic inflammation of the neck of the bladder.

ELIXIR ADJUVANS.

Diekman, George C., reports the recommendation that elixir adjuvans be transferred to the N. F.—*Proc. New York Pharm. Assoc.* 1911, p. 80.

ELIXIR AROMATICUM.

Egan, Thos. A., outlines a modified procedure for making aromatic elixir. He dissolves the necessary oils in all of the alcohol and puts this solution in a refrigerator for 48 hours, then allows the solution to stand at the temperature of the room for an additional 12 hours and follows the directions in the U. S. P. He believes that a preparation made in this way retains the same aroma for a longer time than when made by any other process.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 291.

Campbell, Andrew, states that the manipulative directions of the Pharmacopœia are fundamentally and radically at fault. He proposes to mix the oils thoroughly with a sufficient quantity of an absorbent filtering medium, then having compounded the other ingredients—alcohol, sugar, water—mix with the oils already distributed through the absorbent. After thorough agitation, filtration will proceed to perfect clearness, rapidly and satisfactorily.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 113.

Utech, P. Henry, makes aromatic elixir by using only one-half the quantity of syrup and water called for, in the first part of the operation.—*Bull. Pharm.* 1911, v. 25, p. 369.

Tartak, Leo, asserts that, if pure carbonate of magnesia is used in place of talc, aromatic elixir will pass through the filter much more rapidly than with the U. S. P. talc process.—*Ibid.* p. 122.

Bissell, W. B., suggests reducing the amount of alcohol in simple elixir.—*Proc. New York Pharm. Assoc.* 1911, p. 91.

Richardson, W. S., points out that it is not an uncommon occurrence to meet with a prescription for a child, directing that some comparatively simple medicament be dissolved in the official aromatic elixir containing upwards of 25 per cent of alcohol.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 702.

Bradbury, W. H., states that in addition to the U. S. P. aromatic elixir, the elixir of calisaya N. F. and the digestive elixir N. F. are perhaps the most widely used vehicles or diluents, and are equally objectionable because of the contained alcohol.—*Ibid.* p. 702.

ELIXIR FERRI, QUININÆ ET STRYCHNINÆ PHOSPHATUM.

Egan, Thos. A., recommends dissolving the ferric phosphate in distilled water without the aid of heat, as heat deprives the finished

elixir of its true color.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 292.

Diekman, George C., reports a modified formula for elixir of the phosphates of iron, quinine, and strychnine. The ferric phosphate is increased from 17.5 to 32 gm., the alcohol from 60 cc. to 250 cc.; glycerin is used in place of sugar as a sweetening agent.—Proc. New York Pharm. Assoc. 1911, p. 83.

Sharp, S. A., presents a modified formula for elixir of the phosphates of iron, quinine, and strychnine, in which he uses potassium citrate to facilitate solution and keep the iron salt from precipitating.—*Ibid.* p. 85.

Mittelbach, William, discusses the making of elixir of the phosphates of iron, quinine, and strychnine, and calls attention to the desirability of estimating the cost of preparations of this kind.—Drug. Circ. 1911, v. 55, p. 185.

Diekman, George C., recommends that the elixir of iron, quinine, and strychnine phosphates of the U. S. P. be replaced by the elixir of iron, quinine, and strychnine of the N. F.—Proc. New York Pharm. Assoc. 1911, p. 80.

Hommell, Philemon E., believes that all elixirs of iron can be improved medicinally by adding about 12 or 15 per cent of chemically pure glycerin, this to be combined with aromatic elixir.—Pract. Drug. 1911, v. 29, July, p. 29.

Frazier, W. J., thinks it is a shame for a druggist to buy elixir of iron, quinine, and strychnine. If the preparation is made from good materials it will be right and will keep well.—Proc. Kansas Pharm. Assoc. 1911, p. 30.

Sayre, L. E., reports finding considerable variability in the elixirs of iron, quinine, and strychnine examined. The alkaloids in 9 samples of the preparation were found to vary from 0.346 to 1.014 gm. in 100 cc., and the total residue from 3.402 to 28.240 gm. in a like amount.—Bull. Kansas Bd. Health, 1911, v. 7, p. 141.

ELIXIRIA N. F.

Beringer, George M., points out that foreign pharmacopœias contain practically no formulas for elixirs, while we have rather too many. He thinks that a number of them should be eliminated, and the flavoring in others should be changed to obviate the sameness now characterizing these vehicles.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 31.

Woolsey, J. F., states that elixirs have shown little advance during the past decade, the only modern improvement being rapidity of filtration, by employment of new types of pressure and centrifugal filters.—Pharm. Era, 1911, v. 44, p. 208.

Diekman, George C., reports that a number of formulæ for elixirs containing a minimum per cent of alcohol will be introduced into

the N. F. IV. These are intended as vehicles for the administration of sedatives, such as bromides, etc.—Proc. New York Pharm. Assoc. 1911, p. 91.

The City of Washington Branch, A. Ph. A., condemns preparations which can be used as tipplers, and suggests that the alcohol in all National Formulary preparations be reduced, or eliminated, wherever not actually necessary as a solvent.—J. Am. M. Assoc. 1911, v. 57, p. 2014.

Beringer, George M., outlines formulas for elixirs proposed for recognition in the revision of the National Formulary.—Am. J. Pharm. 1911, v. 83, pp. 79–81.

ELIXIR CALCH LACTOPHOSPHATIS N. F.

Beringer, George M., suggests a formula in which he recommends the use of calcium lactate, 25 gm., lactic acid, 8 cc., and a sufficient amount of aromatic elixir to make 1,000 cc.—Am. J. Pharm. 1911, v. 83, p. 79.

ELIXIR CINCHONÆ N. F.

Peckham, Roy A., reports that the alkaloids contained in a number of samples of elixir calisaya varied from 42 to 318 mgm. per 100 cc. There was also considerable variation in specific gravity and in color. In several there was a heavy precipitate.—Apothecary, 1911, v. 23, June, p. 16.

ELIXIR DIGESTIVUM COMPOSITUM N. F.

Diekman, George C., reports that the American Medical Association committee on formulas recommends that elixir digestivum compositum be deleted.—Proc. New York Pharm. Assoc. 1911, p. 91.

Raubenheimer, Otto, points out that while elixir digestivum is a sort of therapeutic incompatibility, it has been used more than any other preparation; nevertheless the medical association wants the N. F. committee to delete it.—*Ibid.* p. 96.

A contributor to Notes and Queries (Drug. Circ. 1911, v. 55, p. 353) presents several formulas for elixir of lactated pepsin.

Hommell, Philemon E., believes it was foolish ever to have introduced so many pepsin preparations in the N. F., especially those containing more than ten per cent of alcohol, which always impairs the digestive properties of the pepsin. He does not believe it is scientific to combine pepsin with other agents.—Pract. Drug. 1911, v. 29, July, p. 30.

Several proposed modifications of the formula for compound elixir of pepsin are reprinted.—Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 129–130.

Marquier, Adolph F., presents a formula for compound elixir of pepsin which he has used for the past 5 years with good results.—*Merck's Rep.* 1911, v. 20, pp. 308–309.

Bradbury, W. H., thinks that the digestive elixir N. F. is particularly objectionable, in that the name as well as the formula would lead the unwary physician to believe that he was prescribing a mixture of the digestive ferments, when in reality he is directing his patient to take a strongly alcoholic cordial.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 702.

Hommell, P. E., thinks it is doubtful whether diastase has any value at all for digesting starch in the stomach.—*Proc. New Jersey Pharm. Assoc.* 1911, p. 83. See also *Pract. Drug.* 1911, v. 29, July, p. 30.

Sayre, L. E., reports that only one of the seven samples of elixir of lactated pepsin examined was found to be close to standard.—*Bull. Kansas Bd. Health*, 1911, v. 7, p. 216.

ELIXIR OF FORMATES.

Beringer, George M., presents a formula for elixir of formates and elixir of formates compound, for inclusion in the National Formulary.—*Am. J. Pharm.* 1911, v. 83, p. 80.

ELIXIR OF GLYCEROPHOSPHATES.

Beringer, George M., presents a formula for elixir of glycerophosphates and a formula for elixir of glycerophosphates compound, for inclusion in the National Formulary.—*Am. J. Pharm.* 1911, v. 83, p. 80.

ELIXIR PEPSINI N. F.

Petit and Petit comment on the variability of preparations of elixir of pepsin.—*J. Pharm. et Chim.* 1911, v. 3, p. 188.

Hommell, P. E., thinks that the wine and elixir of pepsin, aside from the stimulating action of the alcohol contained in them, possess but little medicinal value; the glycerite of pepsin is the best form to exhibit when pepsin is really indicated, as it sometimes is, in the case of lessened secretion.—*Proc. New Jersey Pharm. Assoc.* 1911, p. 83.

ELIXIR POTASSII BROMIDI N. F.

The Massachusetts State Board of Health (*Monthly Bulletin*, 1911, p. 70) reports on one sample which was low in potassium bromide; 30.8 per cent N. F. standard.

Lythgoe, Hermann C., reports that of 17 samples, 7 were adulterated; the potassium bromide content varying between 5.39 and 15.24 per cent.—*Rep. Massachusetts Bd. Health*, 1911, pp. 439–443.

ELIXIR RHAMNI PURSHIANÆ N. F.

Cowley, R. C., presents a formula for elixir of cascara in which the cascara bark is directed to be boiled for 2 hours with a mixture of distilled water and dilute sulphuric acid, and subsequently extracted with distilled water, the resulting extractive is then neutralized with ammonia and concentrated.—Chem. & Drug. Australas. 1911, v. 26, p. 178.

ELIXIR TERPINI HYDRATIS N. F.

Utech, P. Henry, states that an elixir containing twice the usual amount of the terpin hydrate can be prepared by the addition of a small quantity of acetic acid.—Drug Topics, 1911, v. 26, p. 278. See also Bull. Pharm. 1911, v. 25, p. 369.

Hérissey comments on the instability of elixir of terpin hydrate, and asserts that the strength should be brought back to 1 per cent.—J. Pharm. et Chim. 1911, v. 3, p. 187.

EMPLASTRA.

Kilmer, Fred B., asserts that if plasters have no other action, they have a beneficial effect upon the mind of the user. Therefore, whether the cure comes from the remedy prescribed by the physician, from a change of diet, from modes of hygiene, or from some other cause, the plaster and the seller of the plaster get a certain amount of credit if the plaster is a good one.—Proc. Virginia Pharm. Assoc. 1911, p. 114. See also Pract. Drug. v. 29, Feb. 1911, p. 22.

EMPLASTRUM ADHÆSIVUM.

Kilmer, Fred B., states that the basis of India rubber plaster consists of about 33.3 per cent of the highest grade Para rubber and, according to the nature of the plaster and its properties, gums, such as galbanum and olibanum, waxes and olive oil. These constitute the groundwork of the mass.—Proc. Virginia Pharm. Assoc. 1911, p. 111.

EMPLASTRUM HYDRARGYRI.

An unsigned article (Am. Druggist, 1911, v. 58, p. 137) points out that emplastrum hydrargyri of the Ph. Germ. V contains 20 per cent of mercury and is directed to be assayed by a process similar to that given for the ointment of mercury. See also Chem. & Drug. 1911, v. 78, p. 631; and Pharm. J. 1911, v. 86, p. 654.

Smith, Carl E., outlines a method for the volumetric determination of mercury in plaster of mercury.—Am. J. Pharm. 1911, v. 83, p. 314.

EMPLASTRUM PLUMBI.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78 p. 631) points out that lead plaster is required to contain arachis oil 1; lard 1; lead oxide 1; and water q. s.

Auerbach, Friedrich, discusses the occurrence of lead plaster in cosmetic preparations, and the German laws regulating the sale of preparations of this kind.—*Ztschr. Unters. Nahr. u. Genussm.* 1911, v. 21, pp. 45–54.

EMULSA.

An unsigned article (*Pharm. J.* 1911, v. 87, p. 353) on the science and art of dispensing, discusses the subject of emulsions. See also *Ibid.* pp. 385, 408.

Phillips, P. B., discusses the subject of emulsions.—*Chem. & Drug.* 1911, v. 78, p. 360.

An unsigned article (*N. A. R. D. Notes*, 1911, v. 12, pp. 145 ff.) discusses the making of emulsions, the theory of emulsification, and the nature of some of the emulsifying agents.

Tiebacky, F. W., discusses the use of gelatin, in place of gum, in the making of emulsions of fixed oils.—*Pharm. Weekblad*, 1911, v. 48, pp. 105–107.

Utech, P. Henry, recommends the use of powdered Castile soap, 1 gm. to each 30 cc. of oil, as a most excellent emulsifying agent.—*Bull. Pharm.* 1911, v. 25, p. 370. See also *Drug Topics*, 1911, v. 26, p. 279.

Carlinfanti and Marzocchi discuss the use of saponin and saccharin in oil emulsions.—*Boll. chim. farm.* 1911, v. 50, pp. 609–615.

EMULSUM OLEI MORRHUE.

An unsigned review of the *Ph. Germ. V* (*Pharm. J.* 1911, v. 86, p. 708) points out that *emulsio olei jecoris aselli* contains 50 per cent of cod liver oil and 0.5 per cent of calcium hypophosphite; the emulsifying agents being acacia and tragacanth gums and gelatin, with benzaldehyde, cinnamon water, and syrup to flavor. See also *Chem. & Drug.* 1911, v. 78, p. 631.

An unsigned article (*Pharm. Ztg.* 1911, v. 56, p. 453) calls attention to a discussion on the *Ph. Germ. V* formula for emulsion of cod liver oil.

Richter, O., discusses the making of emulsion of cod liver oil and points out that a mechanical device is necessary to produce a clear white color and permanent emulsion.—*D.-A. Apoth.-Ztg.* 1911–1912, v. 32, pp. 29–30.

Street, John Phillips, reports on 28 samples of cod liver oil emulsion, 11 of which were adulterated or below standard.—*Rep. Connecticut Agric. Exper. Sta.* 1911, p. 215. See also *Ibid.* pp. 163–171.

EPINEPHRINE.

An unsigned note (*Lancet*, 1911, v. 180, p. 73) calls attention to the fact that in the *Year-Book of Pharmacy* for 1910, the word “adrenine” is adopted generically for the active principle of the medulla of the

suprarenal gland. See also pp. 264, 332, 400, and *Chem. & Drug.* 1911, v. 78, p. 53.

An editorial (*J. Am. M. Assoc.* 1911, v. 56, p. 901) discusses the name "epinephrine" versus the name "adrenalin."

Schroder, M. J., outlines the history of epinephrine, and discusses the Ph. Ndl. Supplement requirement for solution of suprarenin hydrochloride.—*Pharm. Weekblad*, 1911, v. 48, pp. 190–193.

Düsterbehn, F., in a review of the Ph. Germ. V, notes that under the heading suprareninum hydrochloricum the pharmacopœia presents some general observations on the chemical nature of the preparation, the chemical forms in which it is available, and the chemical and physical constants.—*Apoth.-Ztg.* 1911, v. 26, p. 242. See also *Pharm. J.* 1911, v. 86, p. 582; and *Chem. & Drug.* 1911, v. 78, p. 125.

An editorial (*Pharm. Ztg.* 1911, v. 56, p. 572) points out that the Ph. Germ. V includes *o*-dioxyphe^{nyl}äthanolmethylaminhydrochlorid, adrenalin, paranephrin, epinephrin, and epirenan, as synonyms for suprarenin hydrochloricum.

Raubenheimer, Otto, does not think that the suggestion to admit adrenalin to the U. S. P. can be made use of, as it is being marketed under a patent and recent court decisions have been decided against other manufacturers.—*Proc. New York Pharm. Assoc.* 1911, p. 94.

An unsigned article (*Am. J. Pharm.* 1911, v. 83, pp. 347–348) announces the validity of the adrenalin patents and presents the conclusions of the judge.

The Council on Pharmacy and Chemistry of the A. M. A. announces the withdrawal of adrin and its preparations.—*Rep. Council Pharm. & Chem.* 1911, pp. 52–53.

An editorial note (*Meyer Bros. Drug.* 1911, v. 32, p. 133) states that at least thirty different brands of medicine, depending upon the active principle of the suprarenal gland for the blood pressure raising effect, are on the market.

The Chemische Fabrik auf Actien (Ger. Pat. 229,281, July 17, 1909) describes a process for producing non-toxic suprarenal preparations.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 240.

Zanfroguini outlines a volumetric method for the estimation of adrenalin, based upon the reaction with manganese peroxide.—*Chem. & Drug.* 1911, v. 79, p. 14.

Hoskins, R. G., presents a consideration of some biologic tests for epinephrine. He discusses the frog's eye test, the uterus test, and the intestine test, and expresses the opinion that, in point of specificity, promptness and delicacy, the intestinal segments are the most satisfactory test objects for epinephrine yet described.—*J. Pharmacol. & Exper. Therap.* 1911–1912, v. 3, pp. 93–99.

Puckner, W. A., presents the report of the Council on Pharmacy and Chemistry on the bio-assay of epinephrine preparations.—*J. Am.*

M. Assoc. 1911, v. 57, p. 1149. Also Rep. Council Pharm. & Chem. 1911, pp. 22-25.

A book review of the Ph. Germ. V (Lancet, 1911, v. 180, p. 119) notes that it is forbidden to dispense solutions which are colored red or have become cloudy.

An editorial note (Pharm. J. 1911, v. 86, p. 90) calls attention to the warning, that the development of a pink color in solutions of adrenalin is evidence of deterioration. The uses of bleaching agents like sodium sulphite to prevent colorization does not prevent deterioration and loss of strength and is to be condemned.

Biberfeld, Joh., reports on a new adrenalin preparation, marketed under the name "Epinine," which was found to be only one-fiftieth of the strength of the official preparation and to correspond closely with the now obsolete homorenin.—Apoth.-Ztg. 1911, v. 26, pp. 678-679.

Kiczka, M., reviews the present status of our knowledge of the chemistry of adrenalin.—Pharm. Prax. 1911, v. 10, pp. 194-195.

Robinson, R., discusses the relation of the suprarenal glands to the gravid state, and the efficacy of the employment of adrenalin in the uncontrollable vomiting in pregnancy.—Compt. rend. Acad. sc. 1911, v. 152, p. 1118.

Nicholas, T. A., reports on the use of adrenalin in the treatment of acute laminitis in horses.—Vet. J. 1911, v. 67, p. 109.

Brown, Samuel A., reports observations on the use of adrenalin chloride in the treatment of cardio-vascular complications of lobar pneumonia.—Am. Med. 1911, v. 17, pp. 600-603.

Tyson and Jump present a note on the treatment of ascites by the intraperitoneal injection of adrenalin.—Therap. Gaz. 1911, v. 35, pp. 10-12.

Esch, P., reports experimental studies on the influence of the active constituent of the suprarenal in combination with local anæsthetics.—Arch. exper. Path. u. Pharmacol. 1910-1911, v. 64, pp. 83-104.

Dixon, W. E., recommends the combination of adrenalin with local anæsthetics for subcutaneous injection.—Pharm. J. 1911, v. 87, p. 15.

Fisher, Guido, in discussing the use of local anæsthesia in dentistry, calls attention to some of the uses of suprarenin in mixtures with local anæsthetics.—Dental Cosmos, 1911, v. 53, pp. 168-177.

Prinz, Hermann, in discussing the use of adrenalin as a hæmostatic, points out that when injected into a vein it will cause a distinct rise of blood pressure, and this increases the hæmorrhage.—*Ibid.* p. 1374.

Underhill, Frank P., reports observations on the influence of urethane, in the production of glycosuria in rabbits after the intravenous injections of adrenalin.—J. Biol. Chem. 1911, v. 9, pp. 13-18.

An editorial (Am. Vet. Rev. 1911, v. 39, p. 11) reviews some recent results from the use of adrenalin in malignant tumors.

An editorial (Therap. Gaz. 1911, v. 35, pp. 501-503) surveys recent publications on the dosage of adrenalin, and presents a table showing the variation in dosage, according to the method of administration and the effect desired.

Riedel's Berichte (1911, pp. 38-40) reviews some of the recent literature relating to the use of adrenalin.

For additional references see Index Med.; J. Am. M. Assoc.; Chem. Abstr.; Zentralbl. Biochem. u. Biophysik; and Chem. Centralbl.

ERGOTA.

Lloyd, John Uri, states that ergot is a gift of domestic medicine and was first mentioned by Adam Lonicer, who about 1565 ascribed to it obstetric virtues, on the authority of women who considered it of remarkable and certain efficacy.—Bull. Lloyd Libr. 1911, No. 18, pp. 35-36.

Miller, Adolph W., in commenting on the market for ergot, points out that in southern Europe ergot is gathered on the field, while in Russia the peasants pick the ergot out of the threshed rye.—Proc. N. W. D. A. 1911, p. 88.

An unsigned market report (Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, p. 660) points out that Swiss ergot, the collection of which, because of the high price of the official drug, would be practical, can not be used because it does not comply with the requirements of the pharmacopœia.

Mercier, L., discusses the rôle of insects as agents in the propagation of "ergot" of grasses.—Compt. rend. Soc. Biol. 1911, v. 70, p. 300.

Warburton, C. W., reports the occurrence of ergot (*Claviceps purpurea*) on oats grown in the oat breeding nursery at Ames, Iowa.—Bot. Gaz. 1911, v. 51, p. 64.

Hartwich, C., in discussing the Ph. Germ. V, points out that the length of the sclerotium is now given as 35 mm. and that the drug is directed to be preserved with care.—Apoth.-Ztg. 1911, v. 26, p. 86.

Rusby, H. H., states that there has been considerable trouble during the year from the offering of ergot of poor quality.—Oil, Paint, and Drug Reporter, 1911, v. 80, Nov. 20, p. 28K.

Wiley, H. W., reports that the failure of the supply of ergot, both from Spain and Russia, has led to the shipment of very inferior lots of this product.—Ann. Rep. U. S. Dept. Agric. 1911-12, p. 430.

Gehe & Co. (Handelsbericht, 1911, pp. 105-106) report that the available ergot, Russian as well as Spanish, has been held at unusually high figures. The reason for the evident failure of the drug in all sections is not apparent at the present time.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 129-131) discuss the valuation of ergot, and outline the limitations for ash included in several pharmacopœias.

Bridel, Marc, reviews the recent work on the composition of ergot.—*J. Pharm. et Chim.* 1911, v. 4, pp. 306-312, 346-352.

The Paris Pharmaceutical Society suggests that the formula for [crystalline] ergotinine be changed from $C_{38}H_{40}N_4O_6=612$, to $C_{38}H_{38}N_4O_6=609$.—*Ibid.* p. 438.

Tanret, Ch., presents a paper on crystallized ergotinin.—*Bull. sc. pharmacol.* 1911, v. 18, pp. 20-25.

Pyman, Frank Lee, reports a new synthesis of 4 (or 5)- β -aminoethyl-glyoxaline, one of the active principles of ergot.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 668-682.

Bennecke, Adolf, reviews the work of Barger, Carr and Dale on the chemistry of ergot, and comments on the physiological action of the derivatives obtained.—*Apoth.-Ztg.* 1911, v. 26, pp. 34-35.

Crawford, Alfred C., presents a review of the chemical work on the active principle of ergot, and enumerates some of the more important articles that have been published on the subject.—*Am. J. Pharm.* 1911, v. 83, pp. 147-171.

Hale, Worth, discusses the several methods of testing ergot and points out that, so far as known, chemical methods do not show any definite relation to biological methods. He thinks that the cornutin of Keller more closely parallels the biological tests than does the benzol extractive of Wood. Of the three biological tests that have been recommended the cock's comb method gives remarkably uniform results.—*Ibid.* pp. 107-111.

Dohme and Engelhardt think that if it can be proved beyond doubt that the percentage of cornutin is in proportion to the physiological activity, this test should be adopted for the U. S. P.—*Am. J. Pharm.* 1911, v. 83, p. 521.

Vanderkleed, Chas. E., reports 6 assays of ergot; lowest, 0.147 per cent; highest, 0.270 per cent cornutin; 5 above and 1 below standard.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 132.

Burmam, James, in a discussion of the annual variation in the active principles in a number of medicinal plants, reports that he found the cornutin content of ergot to vary from 0.022 per cent in 1910 to 0.30 per cent in 1907.—*Schweiz. Wchnschr. Chem. u. Pharm.* 1911, v. 49, p. 8.

Edmunds and Hale discuss the physiological standardization of ergot, report their experiments with the several methods of testing, and point out that chemical methods for the assay of ergot show little relation to biological methods. The cock's comb method is recommended on practical grounds. Because of the variation in strength of ergot preparations, because of deterioration, it is recommended that they be marked with the date of manufacture.—*Bull. No. 76, Hyg. Lab. U. S. P. H. & M.-H. S.* 1911, pp. 58. See also *J. Am. M. Assoc.* 1911, v. 57, pp. 1211, 1292, 1302; and *Lancet*, 1911, v. 181, p. 1419.

Smith, Kline & French Co. (Analytical Report, 1911, p. 48), in discussing the physiological testing of ergot, point out that this drug has defied systematic research to such an extent that even at the present time no chemical or physiological method of standardization is perfectly satisfactory, although its property to produce a rise in blood pressure and to darken a rooster's comb seems to be an index of its therapeutic efficiency.

Wood, H. C., Jr., comments on the unsatisfactory results from the cock's comb and uterine muscle test for ergot and expresses the hope that a chemical test will have been devised before the next edition of the Pharmacopœia appears. For these reasons the committee of the Philadelphia Branch of the American Pharmaceutical Association does not recommend the introduction of a physiologic standard for ergot.—*J. Am. M. Assoc.* 1911, v. 56, p. 606. Also *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 23.

Williams, J. Whitridge, asserts that the manufacturing chemist must resort to some form of animal experimentation in testing every specimen of ergot which he uses for the manufacture of the preparations sold to the public.—*J. Am. M. Assoc.* 1911, v. 56, p. 1166.

Houghton, E. M., in discussing the physiological testing of drugs, states that the physiological assay of ergot depends upon the characteristic blackening of the comb and wattles of selected cocks, when the drug or its preparations are administered internally in suitably sized doses.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 177. See also *Pharm. J.* 1911, v. 87, p. 582, and *Chem. & Drug.* 1911, v. 19, p. 661.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that this very perishable medicament is not always preserved with necessary precautions; that is, in a drying bottle.—*Bull. Soc. Roy. Pharm. Brux.* 1911, v. 55, p. 230; and *J. Pharm. Anvers*, 1911, v. 67, p. 519.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 12) report that 9 samples of ergot were subjected to assay for proportion of water soluble matter, the range observed being from 14.56 to 20.57 per cent, with an average of 16.7.

Roderfeld, A., in a review of the Ph. Germ. V, points out that the majority of pharmacopœias require an extract content of from 15 to 20 per cent for fluid extract of ergot.—*Apoth.-Ztg.* 1911, v. 26, p. 272.

van Berk, L. H., discusses the making of the extract of ergot of the Ph. Ndl. IV.—*Pharm. Weekblad*, 1911, v. 48, pp. 374-375.

An unsigned review of the Ph. Germ. V (*Chem. & Drug.* 1911, v. 78, p. 632) states that extract of ergot is to be made from the freshly powdered drug.

Wood, Horatio C., Jr., discusses the keeping qualities of ergot and its fluid extracts and recommends that the fluid extract of ergot be

marketed in packages of not over four fluid ounces, that each bottle carry the date of its manufacture, and that pharmacists should not dispense a fluid extract of ergot which is more than six months old.—*Am. J. Pharm.* 1911, v. 83, pp. 172–175. See also editorial (*Brit. & Col. Drug.* 1911, v. 59, p. 322).

Quant, Ernest, discussing the preparation of liquid extract of ergot, notes that by cold maceration he obtained a product having a specific gravity of 1.011 and dry extract of 11.2 per cent; and by digestion, 80–100° F., he obtained a product having a specific gravity of 1.038, and dry extract of 15.1 per cent. He adds that with the varying methods of preparation it is not surprising that the products should vary.—*Pharm. J.* 1911, v. 86, p. 331.

Dixon, W. E., states that tyramine is the principal active constituent of the liquid extract of ergot.—*Pharm. J.* 1911, v. 87, p. 15.

Edmunds and Hale found that fluid extracts of ergot varied greatly in strength and that nonpharmacopœial preparations showed even greater discrepancies between the strengths claimed and those actually found.—*Bull. No. 76, Hyg. Lab. U. S. P. H. & M. H. S.* 1911, pp. 55–58.

Livingston, Alfred T., comments on the incompetency of the physiologic test and standardization of ergot to determine the therapeutic uses and efficiency of this drug.—*Merck's Arch.* 1911, v. 13, pp. 137–146.

Ranson and Scott, discussing the results of medicinal treatment in 1,106 cases of delirium tremens, state that it appears that the use of ergot decreased the mortality 15.6 per cent.—*Am. J. M. Sc.* 1911, v. 141, pp. 673–687.

An editorial (*Ellingwood's Therap.* 1911, v. 5, p. 360) discusses the use of ergot in the treatment of spinal meningitis.

Crane, A. J., states that ergot is a complex drug with a variety of principles, though of a similarity in general action with an influence exerted upon unstriated muscular fiber. This selective peculiarity of the agent gives it a scope in medicine not characteristic of any other therapeutically, and qualifies it to meet certain pathological states in those organs having in their anatomical formations the nature of tissue of unstriated variety.—*Eclectic Med. Glean.* 1911, v. 7, pp. 506–509.

Kepler, W. E., reviews the action of ergot, and points out that it has much similarity with the result of arteriosclerosis on the vessel walls.—*Hahnemann. Month.* 1911, v. 46, pp. 33–335.

Additional references on the chemistry, pharmacology and therapeutic uses of ergot will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Zentralbl. Biochem. u. Biophysik*; and *Chem. Centralbl.*

ERIODICTYON.

Henkel, Alice, describes and illustrates yerba santa, *Eriodictyon californicum* (H. and A.) Greene, also gives synonyms, other common names, the habitat and range, and data on the collection, prices, and uses.—Bull. Bur Plant Ind. U. S. Dept. Agric. 1911, No. 219, p. 15.

Rusby, H. H., thinks that eriodictyon should be permitted to contain no more than 5 per cent of stems.—Pharm. Era, 1911, v. 44, p. 95.

ERYTHROL TETRANITRATE.

Craig, Hugh, reports the opinion that erythrol tetranitrate is dangerous to handle, being explosive, and is not used to any great extent.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 607.

Ortner, N. (Jahreskurse ärzt. Fortbild. 1911, No. 2, p. 46), asserts that erythrol tetranitrate is deserving of more consideration in the treatment of arteriosclerotic affections.—Merck's Ann. Rep. 1911, v. 25, p. 231.

ESSENTIA PEPSINI N. F.

Marquier, Adolph F., thinks that this preparation is beyond question misnamed; the title should be Elixir pepsini compositus. He also reports a formula, used by him for a number of years, which he believes will yield a better preparation than that now in the N. F.—Proc. New Jersey Pharm. Assoc. 1911, pp. 95–96.

An editorial (N. A. R. D. Notes, 1911, v. 11, p. 1337) calls attention to and comments on a formula for a modified essence of pepsin.

A discussion by the City of Washington Branch of the A. Ph. A. on modified formulas for essence of pepsin is reprinted.—Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 128–129.

Whorton, C., recommends detannating wine for making essence of pepsin, and asserts that 1 quart of separated milk to 5 gallons of angelica wine, completely separates the tannin.—Alabama Pharm. Assoc. 1911, p. 97.

Wetterstroem, Theodore D., reports that some manufacturing concerns put out as high as four grades of essence of pepsin, all for price. If an offer is lower than the fourth grade, then of course a fifth grade must be started.—Proc. Ohio Pharm. Assoc. 1911, p. 96.

Hommell, P. E., can find but little value in essence of pepsin, except for milk curdling purposes.—Proc. New Jersey Pharm. Assoc. 1911, p. 83. Also Pract. Drug. 1911, v. 29, July, p. 30.

Sayre, L. E., reports that seven samples of essence of pepsin examined did not compare favorably with a sample freshly prepared in the laboratory. The amount of undigested albumin varied from 3 to 25 cc. According to the standard not more than 1 cc. of undigested albumin should remain.—Bull. Kansas Bd. Health, 1911, v. 7, p. 173.

EUCALYPTOL.

Luftensteiner, Hans, in a contribution on anthelmintics, discusses the chemistry of cineol.—Pharm. Prax. 1911, v. 10, pp. 145–148.

The Biennial Report of the Inspection of Pharmacies, 1909–10, calls attention to the fact that the officinal eucalyptol should be free from terpenes.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 234. Also J. Pharm. Anvers, 1911, v. 67, p. 522.

Schultz, W. H., presents a study of the relative efficiency and danger of thymol as compared with certain other remedies proposed for hookworm disease.—J. Am. M. Assoc. 1911, v. 57, pp. 1102–1106.

EUCALYPTUS.

Lloyd, John Uri, states that the leaves of eucalyptus were employed by the natives as a remedy for intermittent fever, and it was thus introduced to Europeans towards the middle of the Nineteenth Century.—Bull. Lloyd Libr. 1911, No. 18, p. 36.

Binz, Edward C., reports some observations on the commercial growing of eucalyptus for oil.—Merck's Rep. 1911, v. 20, p. 9.

He thinks that the California oil of eucalyptus will not be able to compete with Australian for some time to come, for the reason that labor is much cheaper in that country and the tree grows plentifully in the dense forests. He considers the California oil superior in quality to the Australian.—Pract. Drug. 1911, v. 29, February, p. 31.

Miller, A. W., calls attention to a monograph on the utilization of California eucalyptus, compiled by H. S. Betts and C. Stowell Smith. He also notes that the *Eucalyptus globulus* was first introduced and is still more extensively planted than any of the other species.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 51.

An editorial note (Chem. & Drug. Australas. 1911, v. 26, p. 298) states that the eucalyptus oil industry is taking an entirely new development, owing to the discovery that by its use zinc ores can be separated from the worthless gangue associated with it. See also Pharm. J. 1911, v. 87, p. 30.

Fearn, John, states that from personal experience, he does not hesitate to ascribe to these leaves stimulant, tonic antimalarial and antiseptic properties. It stimulates and tones up the membranes either of the respiratory, the gastrointestinal or the renal tract.—Nat. Eclect. M. Assoc. Quart. 1910–1911, v. 2, pp. 227–229.

EUGENOL.

The Biennial Report of the Inspection of Pharmacies, 1909–10, notes that eugenol is frequently incompletely soluble in sodium hydroxide, by reason of the terpenes which it contains.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 234. Also J. Pharm. Anvers, 1911, v. 67, p. 522.

EUONYMUS.

Lloyd, John Uri, states that the bark of the root of euonymus was once a favorite in domestic medication, and was introduced thence to the regular medical profession.—Bull. Lloyd Libr. 1911, No. 18, pp. 36-37.

EUPATORIUM.

Lloyd, John Uri, states that eupatorium, or boneset, became known as a bitter tonic to the early members of the American medical profession and was handed therefrom to physicians of the present day.—Bull. Lloyd Libr. 1911, No. 18, p. 37.

Henkel, Alice, describes and illustrates boneset, *Eupatorium perfoliatum* L., also gives synonyms, other common names, the habitat and range, and data on the collection, prices, and uses.—Bull. Bur. Plant Ind. U. S. Dept. Agric. 1911, No. 219, p. 36.

Rabe, R. P., states that eupatorium perfoliatum is indicated in cases of intermittent fever; worse from cold drinks. Vesical irritation in women.—Hahnemann. Month. 1911, v. 46, p. 399.

Howes, Pitts Edwin, states that the indications for eupatorium perfoliatum in pneumonia are: a full pulse, dyspnoea, pain in the chest, skin hot and moist, frequent turbid urine.—J. Therap & Diet. 1911, v. 5, p. 203.

EXTRACTA.

Woolsey, J. F., states that extracts are now of better quality than ever before because of the use of modern vacuum dryers; most manufacturers put labels on those extracts not standardized by the U. S. P. bearing the ratio of the extract to the drug.—Pharm. Era, 1911, v. 44, p. 208.

See also Grosh, Daniel M., Merck's Rep. 1911, v. 20, p. 334.

Allen and Brewis discuss the moisture and ash contents of medicinal extracts, and submit a tabulated statement of results.—Pharm. J. 1911, v. 87, p. 172. See also Year-Book of Pharmacy, 1911, pp. 417-419.

Jacobsen, K. A. (Arch. Pharm. og Chem. pp. 117-120; 145-149), finds that the examination of the solubility of various extracts in alcohol and water, before and after keeping, showed considerable differences in the effects of age.—Pharm. J. 1911, v. 87, p. 101.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 708), states that the green extracts of belladonna and henbane are now omitted altogether and replaced by extracts made from the dried and powdered leaf ingredients in accordance with the provisions of the Brussels Conference Protocol.

EXTRACT OF BEEF.

Thompson, Caldwell and Wallace discuss the nutritive effects of beef extract, and present the tabulated results of their findings in

dog and in man.—Brit. M. J. 1911, v. 2, pp. 613–619. See correction, p. 710.

Tankard, Arnold Rowsby, calls attention to the extravagant claims made for meat extracts.—Pharm. J. 1911, v. 87, p. 72.

Wright, A. M., presents a communication on certain changes in the composition of the nitrogenous constituents of meat extracts.—J. Soc. Chem. Ind. 1911, v. 30, p. 1197.

Turpaud, Ernest, studying the chemical composition of bouillons and meat extracts, finds that, contrary to received opinion, the former do not contain albuminoid matter.—J. Pharm. et Chim. 1911, v. 3, p. 197.

An editorial (N. York M. J. 1911, v. 94, p. 437) calls attention to an article by Thomas Darlington on the value of meat broths, and points out that broth is one of the few genuine stimulants in the armamentarium, now that we know alcohol to be a narcotic.

EXTRACTUM GLYCYRRHIZÆ.

Hartwich, C., notes that the Ph. Germ. V now permits of from 5 to 11 per cent of ash in extract of licorice.—Apoth.-Ztg. 1911, v. 26, p. 104. See also Pharm. J. 1911, v. 86, p. 654.

Linke, H., states that the Ph. Germ. V permits a maximum of 30 per cent of moisture and 11 per cent of ash in commercial extract of licorice. The sample examined yielded 22.75 per cent of moisture and 6.2 per cent of ash.—Ber. pharm. Gesellsch. 1911, v. 21, p. 196.

Parry, Ernest J., presents a brief paper on the analysis of licorice juice.—Chem. & Drug. 1911, v. 78, p. 625.

Telle, Fernand, discusses the composition and analysis of licorice juice. He notes that pure licorice juice has a certain acidity and is not voluntarily consumed by the public. The provision of a minimum glycyrrhizin content, he thinks wise.—Ann. falsif. 1911, v. 4, pp. 3–12.

Eriksson, Ella, presents some experimental results on the determination of glycyrrhizin and of sugars in powdered glycyrrhiza and extract of glycyrrhiza. The glycyrrhizin content of 7 samples of extract of glycyrrhiza was found to vary from 9.85 to 23.90 per cent.—Arch. Pharm. 1911, v. 249, pp. 144–160. See also p. 240 for correction.

Gadais, L. and J., present a note on the analysis of licorice juice.—Ann. chim. analyt. 1911, v. 16, p. 418. Also Bull. Soc. chim. France, 1911, v. 9, pp. 741–743.

An editorial (Chem. & Drug. 1911, v. 78, p. 403) calls attention to the wide spread adulteration of licorice juice, and gives the glucose, saccharose, and glycyrrhizin values for a number of different specimens of absolute authenticity. See also v. 79, p. 384.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, pp. 46–47) report the analysis of a number of samples of stick liquorice,

the moisture content of which was found to vary from 13 to 18; ash, from 4.5 to 6; water soluble portion, from 55 to 75; water insoluble portion, from 11 to 27; alcohol insoluble, 36.4 to 45.6; total sugars, from 11.7 to 17.3; and glycyrrhizin, from 6.6 to 13 per cent.

FEL BOVIS.

E'We, Geo. E., points out that the U. S. P. requires that purified oxgall shall be "very soluble in water and in alcohol." Five samples examined tested from 64.6 to 79.6 per cent soluble in alcohol. All were entirely soluble in water. Three other samples contained 25.0 to 37.6 per cent of matter insoluble both in water and alcohol. This insoluble matter was found to consist almost entirely of starch.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 126.

Inouye and Sato (Arch. Verdauungs-Krnhktn. v.17, No. 2) report on the advantages of bile as a rational organotherapeutic agent for the symptoms produced by defective secretion of bile in jaundice from various causes.—J. Am. M. Assoc. 1911, v. 56, p. 1690.

FERRI CARBONAS SACCHARATUS.

Hommell, Philemon E., believes that the saccharated carbonate of iron should be dropped, because of its unstable character, its ferruginous taste and its injurious effects on tooth enamel.—Pract. Drug. 1911, v. 29, July, p. 29.

Düsterbehn, F., points out that the Ph. Germ. V directs that oxidation of the ferrous carbonate be prevented by the use of well boiled and boiling water and working rapidly, so as to avoid unnecessary exposure.—Apoth.-Ztg. 1911, v. 26, p. 185.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that this product is not much in favor and there is generally sold the carbonate (?) of red iron which the public prefers.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 235. Also J. Pharm. Anvers, 1911, v. 67, p. 523.

Smith, Kline & French Co. (Analytical Report, 1911, p. 21) reports that 2 samples of ferrous carbonate consisted largely of ferric oxide and contained less than 1 per cent of ferrous carbonate. See also Proc. Pennsylvania Pharm. Assoc. 1911, p. 123, and Bull. Am. Pharm. Assoc. 1911, v. 6, p. 345.

Dixon, W. E., states that chlorotics improve, as regards the percentage of hæmoglobin in the blood, quicker when they are taking one of the ferrous carbonate preparations than when they are taking one of the organic preparations of iron.—Pharm. J. 1911, v. 87, p. 16.

FERRI CHLORIDUM.

Cheatham, T. A., in commenting on the poor quality of tincture of ferric chloride supplied in Georgia, asserts that druggists of that

State are not progressive enough to buy a U. S. P. or N. F. They are still adhering to the old formula.—Proc. Georgia Pharm. Assoc. 1911, p. 36.

Cook, Alfred N., states that some of the tincture of iron examined was found to be a long way from standard.—Bull. South Dakota Food & Drug Dept. 1911, No. 23, p. 2.

Brown, Lucius P., reports that of 12 samples of tincture of iron examined, 5, or 41.67 per cent, were found to be illegal.—Rep. Tennessee Bd. Health, 1911, p. 129.

Wilson, R. C., reports on 170 samples of tincture of chloride of iron, only 21 of which came within 5 per cent of U. S. P. strength.—Proc. Georgia Pharm. Assoc. 1911, p. 35.

Robinson, Beverley, states that the local application of tincture of chloride of iron, diluted with glycerin, is a most valuable astringent and disinfectant in tonsillitis and diphtheria.—Critic and Guide, 1911, v. 14, p. 337.

See also under *Liquor Ferri Chloridi*.

FERRI CITRAS.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that certain samples of citrate of iron do not have the desired content of oxide.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 234. See also J. Pharm. Anvers, 1911, v. 67, p. 523.

Bullock and Peters contribute a note on the use of hypodermics of citrate of iron in the secondary anæmia of tuberculosis.—J. Am. M. Assoc. 1911, v. 57, p. 1428. Also Tr. Am. M. Assoc. Sec. Pharm. & Therap. 1911, pp. 160-162.

FERRI ET AMMONII CITRAS.

Cowley, R. C., discusses the making of iron and ammonium citrate, and points out that, since these alkaline double citrates are more soluble than ferric citrate alone, the manufacture is much hastened by the addition of the alkalis before the iron is "nearly dissolved" as the Ph. Brit. directs.—Chem. & Drug. Australas. 1911, v. 26, pp. 61-62.

See also Pharm. J. 1911, v. 86, p. 131.

The Paris Pharmaceutical Society suggests a slight modification as to the reaction and assay of ammoniated ferric citrates.—J. Pharm. et Chim. 1911, v. 4, p. 438.

Smith, Kline & French Co. (Analytical Report, 1911, p. 21) reports that 2 samples of iron and ammonium citrate were assayed and found to contain 19 and 18.9 per cent of metallic iron.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 39) report that traces of sulphates are still frequently found in iron ammonium citrate. The solubility observed has been such that 10 gm. dissolve even in 5 cc. cold water.

FERRI ET AMMONII SULPHAS.

Hommell, P. E., thinks that ferri et ammonii sulphas should be deleted from the U. S. P.—Proc. New Jersey Pharm. Assoc. 1911, p. 85.

FERRI ET AMMONII TARTRAS.

Hommell, P. E., thinks that ferri et ammonii tartras should be deleted from the U. S. P.—Proc. New Jersey Pharm. Assoc. 1911, p. 85.

FERRI ET POTASSII TARTRAS.

Cowley, R. C., recommends that ferrum tartaratum B. P. be neutralized, and criticizes the present process.—Pharm. J. 1911, v. 86, p. 132.

Hommell, P. E., thinks that ferri et potassii tartras should be deleted from the U. S. P.—Proc. New Jersey Pharm. Assoc. 1911, p. 85.

FERRI ET QUININÆ CITRAS SOLUBILIS.

Cowley, R. C., comments on the making of iron and quinine citrate and points out that this preparation is always acid, which causes it to scale readily when dried on glass plates. He asserts that the iron is always present in the ferric form.—Chem. & Drug. Australas. 1911, v. 26, p. 62.

Düsterbehn, F., discusses the method of making citrate of iron and quinine as described in the Ph. Germ. V; also outlines a method for the assay of this preparation.—Apoth.-Ztg. 1911, v. 26, p. 165.

See also Pharm. J. 1911, v. 86, p. 581, and Chem. & Drug. 1911, v. 78, p. 631.

Murray, B. L., thinks that directions can readily be drawn up for the separation of quantities of alkaloid from the scale salts sufficient for all tests.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 15.

Kollo, Const., discusses the estimation of quinine in iron and quinine citrate.—Pharm. Post, 1911, v. 44, pp. 695-696.

Smith, Kline & French Co. (Analytical Report, 1911, p. 21) reports that 8 samples of iron and quinine citrate varied in quinine content from 11.3 to 13.24 per cent; in iron content from 14 to 17.4 per cent.

FERROUS LACTATE.

Lehmann, F., presents a method for the quantitative determination of iron lactate.—Apoth.-Ztg. 1911, v. 26, pp. 125-126.

Smith, Kline & French Co. (Analytical Report, 1911, p. 26) report that they are led to believe from their experiments that the solubility of iron lactate diminishes quite rapidly with age. One old sample contained 44.8 per cent of insoluble matter; a more recent one, 10.5 per cent. See also Proc. Pennsylvania Pharm. Assoc. 1911, p. 124, and Bull. Am. Pharm. Assoc. 1911, v. 6, p. 345.

FERRI PHOSPHAS SOLUBILIS.

Jones, Eli G., states that ferrum phos. is the fever remedy of the biochemical practice.—*J. Therap. & Diet.* 1911, v. 5, p. 306.

Hinsdale, A. E., states that ferrum phosphoricum is almost specific in many cases of "backache."—*Hahnemann. Month.* 1911, v. 46, p. 154.

FERRI SULPHAS.

Düsterbehn, F., points out that the Ph. Germ. V requires that a 5 per cent solution of ferrous sulphate be not more than slightly acid to litmus paper.—*Apoth.-Ztg.* 1911, v. 26, p. 185.

Smith, Kline & French Co. (Analytical Report, 1911, p. 21) reports that 1 very inferior sample of iron sulphate contained only 12.42 per cent of ferrous sulphate, the balance being largely zinc sulphate and rancid fat. Another sample had a decidedly objectionable appearance. Also *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 344, and *Proc. Pennsylvania Pharm. Assoc.* 1911, p. 123.

Army, H. V., reports on 14 samples of ferrous sulphate; 13 samples up to, or over, the U. S. P. requirement. One sample almost completely oxidized to the ferric form, taking only 2 cc. $\frac{N}{10}$ Potassium Permanganate V. S.—*Proc. Ohio Pharm. Assoc.* 1911, p. 127.

Bachman, Gustav, reports that the 2 samples of ferrous sulphate analyzed by him were 98.3 and 99.5 per cent pure.—*Proc. Minnesota Pharm. Assoc.* 1911, p. 101.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 36) repeat their statement as to the difficulty in obtaining 99.4 per cent of $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ in crystal form.

The Biennial Report of the Inspection of Pharmacies, 1909–10, calls attention to the fact that the official Ph. Belg. iron sulphate is a crystalline powder precipitated by alcohol. So prepared it keeps much better.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 234; and *J. Pharm. Anvers*, 1911, v. 67, p. 523.

Milbauer and Quadrat discuss the use of ferrous sulphate for the basic titration of potassium permanganate solutions.—*Ztschr. anal. Chem.* 1911, v. 50, pp. 601–603.

Dixon, W. E., states that it is permissible to prescribe iron sulphate quite freely by the mouth, because it is known that only a trace of what is administered will be absorbed.—*Pharm. J.* 1911, v. 87, p. 15.

Rocchi, Giuseppe, presents the experimental results of his observations on the action of iron on the "mobile oxygen" of the blood.—*Arch. farmacol. Sper.* 1911, v. 12, pp. 317–324.

FERRUM.

Hommell, P. E., discusses the U. S. P. iron preparations and calls attention to a number that should be retained and a number that

should be eliminated from the pages of the U. S. P.—Merck's Rep. 1911, v. 20, pp. 341-342. Also Proc. New Jersey Pharm. Assoc. 1911, pp. 84-88, and Western Druggist, 1911, v. 33, p. 341.

Raubenheimer, Otto, thinks that iron wire should not be dismissed from the Pharmacopœia. The average pharmacist might use horse-shoe nails.—Pharm. Era, 1911, v. 44, p. 12.

Düsterbehn, F., points out that the Ph. Germ. V requires that powdered iron be at least 97.8 per cent pure.—Apoth.-Ztg. 1911, v. 26, p. 185.

Glücksman, C., discusses the Ph. Austr. VIII and the Ph. Hung. III requirements for ferrum, and presents a table showing the results of the analyses of a number of samples.—Pharm. Prax. 1911, v. 10, pp. 295-300.

Romijn, G., discusses the determination of the iron ion by means of iodine.—Pharm. Weekblad, 1911, v. 48, pp. 996-1000.

Müller and Wegelin present observations on the titrimetric estimation of ferric iron with permanganate, after reduction with zinc.—Ztschr. anal. Chem. 1911, v. 50, pp. 615-623.

Lachs and Friedenthal report observations on the colorimetric estimation of iron.—Biochem. Ztschr. 1911, v. 32, pp. 130-136.

Seel and Friederich report observations on some of the iron preparations now in use.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 124-145.

An editorial note (Lancet, 1911, v. 180, p. 459) calls attention to the recent statement by W. E. Dixon, that the organic compounds of iron mostly derived from blood must first be broken down and digested before absorption occurs.

Zwetkoff, Anna, presents a contribution to our knowledge on the action of iron and of arsenic in chlorosis.—Ztschr. exper. Path. u. Therap. 1911, v. 9, pp. 393-416.

For additional references see Index Med.; J. Am. M. Assoc.; Chem. Abstr.; Zentralbl. Biochem. u, Biophysik; and Chem. Centralbl.

FERRUM REDUCTUM.

Düsterbehn, F., points out that the Ph. Germ V requires that reduced iron contain at least 90 per cent of metallic iron.—Apoth.-Ztg. 1911, v. 26, p. 185.

An unsigned review (Chem. & Drug. 1911, v. 78, p. 13) of the Ph. Germ. V states that 80 per cent of iron is proposed for the Ph. Brit.

Cocx, M. M. A., discusses the identification and valuation of reduced iron.—Pharm. Weekblad, 1911, v. 48, pp. 776-779. See also Apoth.-Ztg. 1911, v. 26, p. 707.

Dohme and Engelhardt think that the U. S. P. assay process for reduced iron could be improved on.—Am. J. Pharm. 1911, v. 83, p. 522.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 36) report that 2 samples of reduced iron tested gave fairly satisfactory

results: metallic iron 95.0 and 89.9 per cent, arsenic 20 and 40 parts per million.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that reduced iron contains a large proportion of oxide and is frequently contaminated by sulphide and phosphide.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 234; and J. Pharm. Anvers, 1911, v. 67, p. 522.

FIGUS.

Lloyd, John Uri, states that the fig has been used from all times as a food and as a confection and the tree is repeatedly mentioned in the Scriptures.—Bull. Lloyd Libr. 1911, No. 18, p. 37.

Tschirch, A., discusses the origin of the cultivated fig tree, and presents an illustration showing the relation of the several types of figs.—Schweiz. Wehnschr. Chem. u. Pharm. 1911, v. 49, pp. 293-297, 309-315.

See also Tschirch and Ravasini, Arch. Pharm. 1911, v. 249, pp. 233-236.

An unsigned article (Pharm. Post, 1911, v. 44, pp. 404-405) reviews several recent communications on the origin of the fig tree and the detection of the original plant.

An unsigned article (Sc. Am. Suppl. 1911, v. 72, p. 189) describes and illustrates several remarkable fig trees.

FLUIDEXTRACTA.

Alpers, Wm. C., points out that fluid extracts are no longer as popular as formerly, and that the U. S. P. IX will contain at least 20 per cent fewer titles than the U. S. P. VIII.—D.-A. Apoth.-Ztg. 1911-12, v. 32, p. 157.

Caspari, Chas., Jr., fears that the proposed increase in the number of fluid extracts foreshadows the possible increased and unwise use of these in the preparations of tinctures and other products.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 612.

Riedel's Berichte (1911, pp. 21-25) reports a number of observations in connection with the specific gravity and extract content of tinctures and fluid extracts; results are presented in the form of tables giving the minimum and maximum specific gravity and the minimum and maximum extract content of the several preparations.

Ziegler, J., discusses the estimation of the specific gravity and extract content of tinctures and fluid extracts.—Apoth.-Ztg. 1911, v. 26, pp. 868-869.

See also comments by Thomann (Schweiz. Wehnschr. Chem. u. Pharm. 1911, v. 49, pp. 758-759).

LaWall and Meade report the results of their examination of several very old fluid extracts.—Pract. Drug. 1911, v. 29, March, p. 31. Also Bull. Am. Pharm. Assoc. 1911, v. 6, p. 104.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, pp. 46-47) present a compilation of suggested standards, ranges of specific gravity and ranges of percentage by volume of alcohol for liquid extracts.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that frequently fluid extracts of all kinds are found which do not comply with the requirements of the Pharmacopœia, and which have an insufficient dry residue or active principles.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 237, and J. Pharm. Anvers, 1911, v. 67, p. 561.

Hommell, P. E., discusses the doses of some bitter fluid extracts and tinctures of the U. S. P. He expresses himself as being very much in favor of a minimum and maximum dosage.—Merck's Rep. 1911, v. 20, p. 195.

An editorial (Eclectic Med. Glean. 1911, v. 7, p. 95) quotes Scudder as stating that the fluid extract is peculiarly an American institution and one of the least creditable we are blessed with.

Arny and Oxley discuss the making of fluid extracts and report a study on repercolation.—*Ibid.* pp. 70-77.

Diekman, George C., reports that the instability of fluid extracts is largely due to the extractive in the final percolate and the changes it undergoes in evaporation, and endorses the suggestion to percolate the drug slowly, 850 cc. for each 1,000 gm. of drug, and take this as the finished product.—Proc. New York Pharm. Assoc. 1911, p. 80.

An editorial (Bull. Am. Pharm. Assoc. 1911, v. 6, p. 57) questions the economic practicability of throwing away one-half the drug in order to save on the cost of alcohol in the making of fluid extracts.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 631) points out that the general rules to be observed in the process of percolation have been slightly altered. See also Pharm. J. 1911, v. 86, p. 708.

Roderfeld, A., in a review of the Ph. Germ. V (Apoth.-Ztg. 1911, v. 26, p. 263) calls attention to the changes that have been made in the general directions for making fluid extracts.

Beringer, George M., points out that but four new fluid extracts have been added to the Ph. Germ. V, namely, cascara, cinchona, granatum, and simaruba.—Proc. New Jersey Pharm. Assoc. 1911, p. 80.

Wulff, C., criticizes the Ph. Germ. V directions for making fluid extracts, and suggests that the term "drop" should be replaced by the term "part."

Kroeber, Ludwig, discusses the production of fluid extracts by means of pressure.—Pharm. Prax. 1911, v. 10, pp. 585-588. Also Pharm. Zentralh. 1911, v. 52, pp. 1261-1264.

LaWall, Charles H., outlines a new method for the assay of alkaloidal fluid extracts, in which he uses sodium chloride to remove

fat, resins, chlorophyll, and other substances that are commonly extracted with immiscible solvents, such as chloroform and ether.—*Am. Druggist*, 1911, v. 59, pp. 145-146.

FLUIDEXTRACTA N. F.

FLUIDEXTRACTUM ADONIDIS N. F.

Roche (*Sem. Méd.*) states that tincture of *adonis vernalis*, although demonstrated by experiment on the lower animals to be four times as effective as tincture of *digitalis*, has proved in his hands absolutely inert in human subjects.—*Drug. Topics*, 1911, v. 26, p. 374. See also *N. York M. J.* 1911, v. 94, p. 1137.

Merck, E. (*Ann. Rep.* 1911, Darmstadt, 1912, v. 25, pp. 75-79), describes adonidin and reviews the literature.

FLUIDEXTRACTUM ANGELICÆ RADICIS N. F.

Mitlacher, Wilhelm, in reporting his observations on the cultivation of angelica, points out that in the well fertilized portion of the patch the plants appeared to do very well.—*Pharm. Post*, 1911, v. 44, p. 203.

Böcker and Hahn report on a new constituent of the volatile oil of angelica root. A lactone that is as yet not satisfactorily defined.—*J. prakt. Chem.* 1911, v. 83, pp. 243-248.

FLUIDEXTRACTUM ARALIE RACEMOSÆ N. F.

Rabe, R. P., states that *aralia racemosa* is indicated in cases of bronchitis and loose cough.—*Hahnemann. Month.* 1911, v. 46, p. 398.

FLUIDEXTRACT OF BAPTISIA.

An editorial (*Hahnemann. Month.* 1911, v. 46, pp. 59-60) comments on the report of the Council on Pharmacy and Chemistry of the American Medical Association on baptisia, and states that the fact that this remedy has been used successfully by hundreds of practical physicians at the bedside for many years has no significance in the minds of these gentlemen.

FLUIDEXTRACTUM CAMELLIÆ N. F.

True, R. H., in reporting the progress in the cultivation of tea, states that much of the seed that has been obtained failed to germinate. This is particularly true of Japanese seed.—*Proc. N. W. D. A.* 1911, p. 170.

Galloway, B. T., reports that efforts to introduce machinery in the pruning of tea plants have proved successful.—*Ann. Rep. U. S. Dept. Agric.* 1911, 1912, p. 277.

An unsigned article (Sc. Am. Suppl. 1911, v. 71, p. 14) calls attention to some of the diseases of the tea plant.

Spaeth, Eduard, discusses the artificial coloration of tea, and outlines methods for detecting the same.—Pharm. Zentralh. 1911, v. 52, pp. 919-924, 948-953, 967-971.

Jaffa, M. E., in the referee report on tea and coffee, outlines the methods of analysis for tea, and presents some of the comments of collaborators.—Proc. Assoc. Off. Agric. Chem. 1911, 28th Ann. Conv. pp. 163-167 (Bull. Bur. Chem. U. S. Dept. Agric. 1912, No. 152).

Besson, A. A., discusses the valuation of tea, the determination of stems, loss on drying, ash content, ash content of the extracted tea, water soluble substances, caffeine content, and tannin content.—Chem. Ztg. 1911, v. 35, pp. 813-815, 830-832.

Man, J. R., in a review of teas, calls attention to the important difference in their composition, and discusses the effects of tea drinking. The caffeine content of 5 samples of tea examined varied from 1.60 to 2.10 per cent.—Proc. Texas Pharm. Assoc. 1911, pp. 106-108.

FLUIDEXTRACTUM CAULOPHYLLI N. F.

Gilbard, J. F. H., describes a reaction for caulophyllin.—Analyst, 1911, v. 36, p. 270.

Palmer, Chauncey D., states that caulophyllum unquestionably exerts a very decided influence upon the genital organs of women.—Eclectic Med. Glean. 1911, v. 7, pp. 590-591.

FLUIDEXTRACT OF CHIONANTHUS.

Hauss, Augustus P., states that chionanthus has a specific and direct effect on the pancreas and, from his own observations, he believes that chionanthus is a remedy of great value in all cases of diabetes mellitus.—Nat. Eclect. M. Assoc. Quart. 1910-11, v. 2, p. 229.

He also reports on the use of chionanthus in diabetes.—Ellingwood's Therap. 1911, v. 5, pp. 218-219.

Harvey, G. W., recommends chionanthus for the patient as yellow as saffron. If the jaundice is from gallstones, he gives liberal doses of pure olive oil and wrests the case out of the hands of the surgeon in a very short while.—Hahnemann. Month. 1911, v. 46, p. 638.

FLUIDEXTRACTUM COFFEE N. F.

Harris, William, states that coffee was first introduced into Jamaica in 1728.—Bull. Dept. Agric. Jamaica, 1911, v. 1, No. 4, pp. 246-247.

Gorter, K., presents a contribution to our knowledge of coffee and reports experimental work to determine the nature of chlorogenic acid.—Ann. Chem. 1910, v. 379, pp. 110-130.

Nottbohm and Koch report on a coffee glaze containing arsenic.—Ztschr. Unters. Nahr. u. Genussm. 1911, v. 21, pp. 288-290.

v. Raumer, E., reports some observations on the glazing of coffee, and points out that the practice is objectionable and should be discontinued.—*Ibid.* pp. 102-109.

Griebel and Bergmann report a new adulterant for coffee consisting of the roasted seed of a leguminous plant.—*Ibid.* pp. 481-484.

Spaeth, Eduard, discusses the artificial coloring of coffee and methods for detecting the same.—*Pharm. Zentralh.* 1911, v. 52, pp. 813-818, 839-843, 893-897.

Jaffa, M. E., in the referee report on tea and coffee, outlines the methods of analysis for coffee, and presents some of the comments of collaborators.—*Proc. Assoc. Off. Agric. Chem.* 1911, 28th Ann. Conv. pp. 163-167 (*Bull. Bur. Chem., U. S. Dept. Agric.* 1912, No. 152).

FLUIDEXTRACT OF CONDURANGO.

Linke, H., reports some observations on the extract content of condurango and on the Ph. Germ. V fluid extract of condurango. He found the ash content of 3 samples of the bark to vary from 8.84 to 9.82 per cent, and the extract content from 13.86 to 20.30 per cent.—*Apoth.-Ztg.* 1911, v. 26, pp. 398-401.

The Council on Pharmacy and Chemistry of the A. M. A. reports its refusal to include condurango in N. N. R., because its only proper use is as a bitter stomachic, as such it is inferior to a number of others.—*Rep. Council Pharm. & Chem.* 1911, pp. 54-55.

Leming, W., states that the specific indications for condurango are malignant ulcerations and fissures, with great atomicity of tissue, increased secretion and pain, gastric cancer, and ulceration. Malignant sore mouth, wherever prolonged contact with the drug may be had.—*Ellingwood's Therap.* 1911, v. 5, p. 103. See also Hahnemann. *Month.* 1911, v. 46, p. 399.

FLUIDEXTRACTUM COPTIS N. F.

Holm, Theo., describes and illustrates *Coptis trifolia* (L.) Salisb., commonly known as "goldthread." He also discusses the microscopic characteristics of the root, rhizome, and leaf of the plant.—*Merck's Rep.* 1911, v. 20, pp. 4-6.

Reed, A. P., states that *coptis trifolia*, or goldthread, is a substitute for *hydrastis*, though perhaps weaker and not so good as the *berberis* preparations.—*Eclectic Med. Glean.* 1911, v. 7, p. 598.

FLUIDEXTRACTUM CORNUS N. F.

Heeve, William L., enumerates *cornus florida* as a reconstructive tonic in cases of chronic diarrhoea.—*Nat. Eclect. M. Assoc. Quart.* 1910-11, v. 2, p. 121.

FLUID EXTRACTUM COTO N. F.

Caesar & Loretz (*Jahres-Bericht*, 1911, p. 20) report that additional supplies of true coto are not available and the drug on hand is now reduced to practically negligible quantities.

Schneider, Albert, states that paracoto is closely similar to coto bark in macroscopic as well as microscopic characteristics, excepting that the reddish-brown oily particles are wanting. Genuine paracoto bark is rare, spurious barks being substituted. Apply organoleptic tests. Coto and paracoto are both spicy pungent, whereas most of the substitutes are not spicy pungent.—*Merck's Rep.* 1911, v. 20, pp. 2-3.

Heeve, William L., states that in cases of chronic diarrhoea coto is an admirable tonic astringent to mucous membranes, where we have jellylike, frequent evacuations.—*Nat. Eclect. M. Assoc. Quart.* 1910-11, v. 2, p. 121.

FLUID EXTRACT OF DIOSCOREA.

Rodecker, R. C., has used dioscorea almost daily and feels that he can give an authoritative pronunciamiento. So far as dosage and usage is concerned, he gives "men's size doses to men's diseases," and points out that the dosage of dioscorea in all cases where it is indicated is no less than from 15 to 60 drops.—*Nat. Eclect. M. Assoc. Quart.* 1910-11, v. 2, pp. 319-322.

FLUID EXTRACT OF ECHINACEA.

Kraemer and Sollenberger discuss, with illustrations, the pharmacognosy of echinacea.—*Proc. New Jersey Pharm. Assoc.* 1911, pp. 46-54. See also *Am. J. Pharm.* 1911, v. 83, pp. 315-324, and *Am. Druggist*, 1911, v. 58, pp. 377-378.

Beringer, George M., presents a formula, with directions, for making fluid extract of echinacea.—*Am. J. Pharm.* 1911, v. 83, pp. 324-325. Also *Proc. New Jersey Pharm. Assoc.* 1911, pp. 55-56.

Webb, Frank, states that the original discoverer of echinacea was an Eclectic doctor. This drug has a wide field of usefulness, and is anti or against any toxines, of whatever name, that the system absorbs; the more malignant the condition the better it seems to act.—*Nat. Eclect. M. Assoc. Quart.* 1910-11, v. 2, pp. 106-107.

Shadwick, G. W., states that echinacea is one of the best friends that a physician has at his command if properly understood and used.—*J. Therap. & Diet.* 1911, v. 5, p. 363.

Banta, William, reports the successful use of echinacea, externally and internally, in cases of scorpion bite.—*Eclectic M. J.* 1911, v. 71, p. 385.

Webb, Frank, states that there are a multitude of indications for echinacea *augustifolia*, but they all point to one end—sepsis or blood depravation.—*J. Therap. & Diet.* 1911, v. 5, p. 177.

Fahnestock, J. C. (Chironian), states that there is a tired feeling that runs all through echinacea. It is the great tired feeling remedy.—*J. Am. Inst. Homœop.* 1911, v. 3, p. 1035.

FLUID EXTRACT OF HELONIAS.

Palmer, Chauncey D., states that helonias is a tonic, especially addressed to the female sexual organs. It is thought by some to prevent the habit of miscarriage and to be of value in correcting functional derangements arising therefrom.—*Eclectic Med. Glean.* 1911, v. 7, p. 591.

Rabe, R. P., states that helonias is indicated in cases of itching of vulva.—*Hahnemann. Month.* 1911, v. 46, p. 399.

FLUIDEXTRACTUM IRIDIS N. F.

Power and Salway report a chemical investigation of the constituents of the rhizome of *Iris versicolor*.—*Am. J. Pharm.* 1911, v. 83, pp. 1-14.

Rusby, H. H., asserts that iris is very largely used and should be restored to the Pharmacopœia; that *Iris missouriensis* appears to be the source of a considerable part of that employed and, if equally good, should be recognized.—*Pharm. Era*, 1911, v. 44, p. 94.

Woodbury, Benj. C., reports that iris versicolor (3x) has been very successful in cases of bilious headache, also in neuralgia following grippe, with the characteristic nausea, right-sided pain, and vomiting.—*Hahnemann. Month.* 1911, v. 46, p. 474.

FLUIDEXTRACTUM STERCULÆ N. F.

Baillaud, M. E., presents an abstract from a volume on the useful vegetation of occidental Africa, by Chevalier and Perrot, in which they describe the several varieties of cola and their uses.—*J. Agric. trop.* 1911, v. 11, pp. 232-238.

Chevalier and Perrot present an interesting illustrated paper on kola, its history, geography, chemistry, etc.—*Bull. sc. pharmacol.* 1911, v. 18, pp. 534-546.

Rosenthaler, L., describes and illustrates the nature of the materials obtained from kola by pyroanalysis.—*Ber. pharm. Gesellsch.* 1911, v. 21, p. 533.

Glücksman, C., discusses the composition of fluid extract of cola and the determination of the tannin content by means of formaldehyde.—*Pharm. Prax.* 1911, v. 10, pp. 246-248.

Goris, A., presents a note on a second crystalline compound, phenolic in nature, obtained from kola, fresh or dried.—*Bull. sc. pharmacol.* 1911, v. 18, pp. 138-140. See also *Schweiz. Wchnschr. Chem. u. Pharm.* 1911, v. 49, pp. 274-276.

Dohme and Engelhardt think that kola and its preparations should be assayed by a process similar to that given for guarana.—*Am. J. Pharm.* 1911, v. 83, p. 522.

Caesar & Loretz (*Jahres-Bericht*, 1911, pp. 119–120) discuss the valuation of cola and present a table showing the requirements for alkaloids and limitations for ash included in the several pharmacopœias.

Vanderkleed, Chas. E., reports 7 assays of cola, lowest 1.226 per cent, highest 2.648 per cent alkaloids; all above standard.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 132.

Warin, Grand, and Allard comment on the Ph. Fr. V official method of making extract of cola.—*J. Pharm. et Chim.* 1911, v. 3, p. 185.

FOENICULUM.

Lloyd, John Uri, states that the employment of fennel in Northern Europe has been from all time.—*Bull. Lloyd Libr.* 1911, No. 18, p. 37.

Rusby, H. H., states that fennel seed is extremely liable to contamination with large amounts of stems, gravel, sand, dust, weed seeds, and other impurities.—*Oil, Paint, and Drug Reporter*, 1911, v. 80, Nov. 20, p. 28K.

Hartwich, C., points out that German fennel seed has occurred in the market fully 10.6 mm. long, and that the Ph. Germ. maximum length of 9 mm. is too limited.—*Apoth. Ztg.* 1911, v. 26, p. 21.

Linke, H., points out that the Ph. Germ. V permits 10 per cent of ash in fennel. He found 8.6 per cent.—*Ber. pharm. Gesellsch.* 1911, v. 21, p. 190. See also *Pharm. J.* 1911, v. 86, p. 653.

Umney and Bennett state that in their examination there is indication of exhausted fruits being used. Figures for ash, whole fruits, are 4.8 to 16.3; ether extract, 18.4 to 20.8; powder, 8.5 to 26.4; ether extract, 15.2 to 19.2.—*Pharm. J.* 1911, v. 86, p. 597. See also *Chem. & Drug.* 1911, v. 78, p. 674; and *Drug Topics*, 1911, v. 26, p. 148.

FRANGULA.

Lloyd, John Uri, states that *Rhamnus catharticus* is of wide distribution, prevailing over Northern Africa, most of Europe, the Caucasus, and into Siberia. It was known as a laxative before the Norman Conquest, being called waythorn or hartahorn.—*Eclectic Med. Glean.* 1911, v. 7, p. 410. See also *Bull. Lloyd Libr.* 1911, No. 18, p. 38.

Caesar & Loretz (*Jahres-Bericht*, 1911, p. 20) report that the production of frangula has been materially increased during the past few years and that this drug is again being used more extensively in place of the less desirable and more expensive cascara sagrada. The extract content of a good quality of bark is approximately 20 per cent and the ash from 6 to 7 per cent.

Rusby, H. H., states that a spurious bark, apparently a species of *rhamnus*, has been found mixed in considerable quantity with frangula, and should be carefully watched for by dealers.—Oil, Paint and Drug Reporter, 1911, v. 80, Nov. 20, p. 28K.

"D. B." reports that, according to W. Mitlacher, the Austrian inspection of pharmacies found that the more ordinary adulterations consist in a mixture with the bark of alder. The bark of frangula is colored dark red by potash, while that of the alder does not give this reaction.—Bull. sc. pharmacol. 1911, v. 18, Annexes, p. 10.

Hartwich, C., comments on the incomplete description of the structural characteristics of frangula as given in the Ph. Germ. V, and states that the differences between the primary and secondary sclerenchyma fibers are not described with sufficient clearness.—Apoth.-Ztg. 1911, v. 26, p. 6.

Tschirch and Bromberger report a study on the composition of the bark of *Rhamnus cathartica*.—Arch. Pharm. 1911, v. 249, pp. 218–223. See also Oesterle and Sypkens-Toxopéus, *Ibid.* pp. 311–321, and Schweiz. Wehnschr. Chem. u. Pharm. 1911, v. 49, pp. 353–357, 369–378.

Fischer and Gross, in a contribution to the knowledge of chrysophanic acid, report observations on frangula emodin and several oxonium combinations of anthracene derivatives.—J. prakt. Chem. 1911, v. 84, pp. 369–382.

Rosenthaler, L., calls attention to, and describes, the crystals obtained from frangula by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, p. 342.

Vanderkleed, Chas. E., reports 3 assays of frangula; lowest 1.420 per cent, highest 2.290 per cent; all above standard.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

GALLA.

Lloyd, John Uri, points out that oak galls are mentioned by Theophrastus and other writers and have long been used as a remedy in diarrhoea.—Bull. Lloyd Libr. 1911, No. 18, p. 38.

The Chemist and Druggist (1911, v. 78, p. 369) states that the Japanese exports of galls amounted to 50,850 kin in 1908, 388,307 in 1909, and 832,623 in 1910.

Hartwich, C., points out that the Ph. Germ. V describes galls as grayish green, yet appears to permit the presence of galls from which the insect has escaped and which are usually of yellowish color.—Apoth.-Ztg. 1911, v. 26, p. 21.

Rosenthaler, L., calls attention to, and describes, the crystals obtained from galla by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 342–343.

Schneider, Albert, reports on 4 samples of nutgall, all of which were adulterated.—Pacific Pharm. 1911, v. 5, p. 179.

GAMBIR.

Lloyd, John Uri, states that gambir has been obtained from the Orient from the beginning of historical records. The dried juice of an Indian tree is often confused with gambir and its extract, known as catechu or cutch, is often substituted therefor.—Bull. Lloyd Libr. 1911, No. 18, p. 38.

Brumwell, H., discusses the microscopical examination of gambir, with half a dozen illustrations.—J. Soc. Chem. Ind. 1911, v. 30, pp. 475–477.

Figart, D. Milton, reports exports of gambir from the Straits Settlements to the United States amounting for the first quarters of the years 1910 and 1911 to 1,926 and 832 long tons, respectively.—Cons. & Tr. Rep. June 23, 1911, p. 1310.

Rusby, H. H., suggests that, owing to the liability of gambir to contain excessive amounts of wood and bark tissue and other impurities, the allowable limit of insoluble matter should be specified.—Pharm. Era, 1911, v. 44, p. 140.

Young, J. B., reports that 8 samples of gambir examined were well above the requirement of 70 per cent solubility in alcohol, but showed considerable variation in ash. Three of the 8 samples gave less than 5 per cent, but the other 5 varied from 19.3 to 32 per cent ash.—Apothecary, Apr. 1911, v. 23, p. 28.

Gehe & Co. (Handelsbericht, 1911, p. 150) point out that, in place of Pegu catechu, the cheaper mangrove variety is being used quite extensively. They also present a table showing the amount of cutch and of gambir imported into London for the years 1908 to 1910.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 653) points out that for catechu the portion insoluble in alcohol is now limited to 30 per cent, instead of 15 per cent as formerly.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 29) report on 3 samples of cutch, 2 of which were decidedly inferior, having a phenolic odor and appearance suggesting careless drying and burning. The gallo-tannin equivalent (Löwenthal) only reached 23.5 and 26 per cent; the third sample had the normal equivalent of 40 per cent.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 9) report that 2 samples of catechu powder, prepared from the Ph. Brit. drug, yielded 3.56 to 4.34 per cent of ash. A specimen of black catechu proved to yield 2.95 per cent of ash.

GELATINUM.

Thiele, Ludwig A., discusses, with illustrations, the manufacture of gelatin. The most important raw materials consist of bones (osseine) and hide stock.—Tr. Am. Inst. Chem. Eng. 1911, v. 4, 1912, pp. 371–385.

Kissling, Richard, reviews some of the literature relating to progress in the manufacture of glue and gelatin.—*Chem. Ztg.* 1911, v. 35, pp. 423–425.

Cavalier, Paul, discusses the use of refrigeration in the glue and gelatin industry.—*Chem. Ztg.* 1911, v. 35, p. 17.

Hartwich, C., points out that the Ph. Germ. V prescribes tests for the presence of copper and of sulphurous acid in gelatin.—*Apoth.-Ztg.* 1911, v. 26, p. 22.

See also *Pharm. J.* 1911, v. 86, p. 654.

Linke, H., states that even the better types of commercial gelatin do not comply with the Ph. Germ. V requirements for absence of sulphurous acid. The ash content of commercial gelatins examined by him varied from 1.35 to 1.65 per cent, the Ph. Germ. V limit being 2 per cent.—*Ber. pharm. Gesellsch.* 1911, v. 21, pp. 190–191.

Leffmann and LaWall present a note on sulphur dioxide in commercial gelatins.—*Analyst*, 1911, v. 36, p. 271.

Pearson, W. A., reports that only 1 sample of gelatin failed to give tests for sulphites.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 123. See also *Bull. Pharm. Assoc.* 1911, v. 6, p. 345, and *Analytical Report (S. K. & F.)*, 1911, p. 24.

Köpke, Otto, discusses the occurrence of arsenic in gelatin and points out the various possibilities of contamination.—*Arb. k. Gandtsamte*, 1911, v. 38, pp. 290–293.

See also *J. Am. M. Assoc.* 1911, v. 57, p. 2151.

Dhéré, Ch., presents the results of his study of the physicochemical properties of demineralized gelatin.—*J. Phys. et Path. gén.* 1911, v. 13, pp. 157–177.

König, Greifenhagen, and Scholl discuss the valuation of gelatin and its separation from other nitrogen compounds.—*Ztschr. Unters. Nahr. Genussm.* 1911, v. 22, pp. 723–727.

Tiebackx, F. W., comments on the behavior of gum and gelatin with reagents.—*Pharm. Weekblad*, 1911, v. 48, pp. 691–693.

Schmidt, Eugene, outlines a sensitive reaction for glue, in which he uses solution of ammonium molybdate as in the determination of phosphorus, which gives a characteristic white amorphous precipitate.—*Chem. Eng.* 1911, v. 13, pp. 27–28.

Herold, Julius, discusses the analysis of gelatin and describes and illustrates a method for determining the melting point of gelatin jellies.—*Chem. Ztg.* 1911, v. 35, pp. 93–94.

Notices of Judgment, Nos. 1127 and 1128, under the food and drugs act, deal with the adulteration of gelatin.

Pearson, W. A., states that some of the highest priced gelatins, especially prized for use in culture media, contain considerable quantities of sulphites, which may seriously interfere with the growth of microorganisms.—*Hahnemann. Month.* 1911, v. 46, p. 569.

Tiebackx, F. W., discusses the use of gelatin in place of gum in the making of emulsions of fixed oils.—Pharm. Weekblad, 1911, v. 48, pp. 105–107.

Minami, D., reports some experiments on the resorption of gelatin in the small intestine.—Biochem. Ztschr. 1911, v. 34, pp. 261–262.

A book review (Brit. M. J. v. 1, p. 561) calls attention to Robin's striking tribute to the value of gelatin injections in the treatment of aortic aneurism.

Linke, H., takes exception to the frequently made statement that solutions of commercial gelatin can not be satisfactorily sterilized.—Ber. pharm. Gesellsch. 1911, v. 21, p. 544.

Additional references on the chemistry and therapy of gelatin will be found in Index Med.; Chem. Abstr.; and Zentralbl. Biochem. u. Biophysik.

GELSEMIUM.

Lloyd, John Uri, states that gelsemium was mentioned by Elliott in 1821, but not until it was discussed by King, in 1852, did it attract the attention of medical practitioners, largely Eclectics.—Bull. Lloyd Libr. 1911, No. 18, p. 42.

Sayre, L. E., presents a brief study of the more toxic alkaloids of gelsemium.—Midl. Drug. 1911, v. 45, p. 439.

See also Drug. Circ. 1911, v. 55, pp. 8–9, and Eclectic Med. Glean. 1911, v. 7, pp. 120–126.

Kimberly, C. H., reports a discussion on the assay of gelsemium and the recommendation that the chemical standardization of gelsemium be based upon the percentage of gelseminine and not on total alkaloids.—Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 160–162.

Dohme and Engelhardt think that an assay process for gelsemium and its preparations would only be of relative value as long as the proportion of the active substance to the inactive is not known in the residue determined as total alkaloids.—Am. J. Pharm. 1911, v. 83, p. 522.

Tunmann, O., discusses the detection of *Gelsemium sempervirens* Mich. by the microsublimation of æsculin which occurs in this drug.—Apoth.-Ztg. 1911, v. 26, pp. 812–814.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 33) report that 1 sample of root examined had a close resemblance to gelsemium, but altogether lacked the microscopic character, and failed to give the color reaction.

Coblentz, Virgil, found in the filled prescriptions presented to him for analysis tinctures of gelsemium all very low in alkaloids.—Pract. Drug. 1911, v. 29, Apr., p. 29.

Brunker, J. E., reports that of 5 samples of tincture of gelsemium examined the average extractive was 1.6 gm. in 100 mls.; alcohol by volume, 55.3 per cent.—Brit. & Col. Drug. 1911, v. 60, p. 229.

Smith, Kline & French Co. (Analytical Report, 1911, p. 24) reports that 2 samples of fluid extract of gelsemium were assayed; total alkaloids in 100 cc., 0.504 and 0.46 gm.

Coblentz, Virgil, reports that samples of fluid extract of gelsemium, dispensed in various pharmacies in New York City, were all far below normal standards.—J. Ind. & Eng. Chem. 1911, v. 3, p. 540.

Moore, Charles Watson, reports a study of some derivatives of gelsemine.—J. Chem. Soc. Lond. 1911, v. 99, pp. 1231-1240.

The Council on Pharmacy and Chemistry of the A. M. A. reports the omission of gelsemine hydrochloride from N. N. R. because it was found to have little physiological activity.—Rep. Council Pharm. & Chem. 1911, pp. 57-58.

An editorial (Eclectic Med. Glean. 1911, v. 7, pp. 11-12) states that the action of the alkaloids of gelsemium has long been an enigma to theorists, and questions whether the variability can be explained.

The Pharmaceutical Journal (1911, v. 87, p. 49) reports the deaths, at Stanley Hospital, Liverpool, of two men who drank an herb tea made of gelsemium, mistaken for sarsaparilla; a woman and a girl, who drank less deeply of the tea were blinded for a time but recovered.

Waterhouse, E. R., believes gelsemium to be nearly a specific in tetanus.—Eclectic M. J. 1911, v. 71, p. 220.

Kopp, Frederick, states that gelsemium *sempervirens* will be found useful in the treatment of eruptive fevers.—Hahnemann. Month. 1911, v. 46, p. 637.

An editorial (Ellingwood's Therap. 1911, v. 5, p. 439) asserts that gelsemium is as important a remedy as there is in the *materia medica*.

GENTIANA.

Lloyd, John Uri, notes that gentian was mentioned by both Pliny and Dioscorides and was used throughout the Middle Ages as a domestic medicine.—Bull. Lloyd Libr. 1911, No. 18, p. 42.

Hartwich, C., points out that the Ph. Germ. V now mentions *Gentiana lutea* as the chief source of the drug, though other species are permitted.—Apoth.-Ztg. 1911, v. 26, p. 57.

Gehe & Co. (Handelsbericht, 1911, p. 100) state that Lochmann, in a comparative examination of natural and of cultivated gentian, concludes that the two are practically identical.

Rusby, H. H., notes that the acceptability of gentian is determined by the percentage of extractive matter.—Pharm. Era, 1911, v. 44, p. 95.

Bridel, Marc, discusses the variations in the composition of gentian root, in the course of vegetation during the year, with tabulated statements of results.—J. Pharm. et Chim. 1911, v. 3, pp. 294-305. See also *Ibid.* v. 4, pp. 455-458.

Tunmann, O., discusses the microchemical detection of gentian root and presents an illustration showing a microphotograph of gentisin crystals obtained by direct microsublimation.—Gehe & Co., Handelsbericht, 1911, pp. 155-162.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for gentian: Water content, 10.89 per cent; ash content, 3.47 per cent; alkalinity of water soluble ash, 0.53 per cent; total alkalinity of ash, 3.04 per cent.—Proc. Ohio Pharm. Assoc. 1911, p. 70.

Howard, Charles D., reports that 11 samples of gentian root were examined, the ash content of which was found to range from 2.97 to 9.20 per cent. More than two-thirds of the samples examined showed an ash content well under 5 per cent.—New Hampshire San. Bull. 1911, v. 3, No. 13, p. 254.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 12) report that ash was determined on 7 batches of powdered gentian root, the figures obtained ranging from 3.68 to 5.63 per cent and averaging 4.68 per cent.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 33) report that 2 samples of gentian root yielded 33.4 to 33.8 per cent extractive and contained 8.0 to 10.8 per cent of moisture.

Wiley, H. W., reports powdered gentian containing foreign material.—Ann. Rep. U. S. Dept. Agric. 1911, 1912, p. 424.

Notice of Judgment, No. 754, under the food and drugs act, deals with the adulteration and misbranding of gentian.

Schneider, Albert, reports on 2 samples of gentian, one of which was adulterated with rumex root.—Pacific Pharm. 1911, v. 5, p. 177.

"D. B." reports that, according to W. Mitlacher, the Austrian inspection of pharmacies shows that, for several years, gentian has been mixed with the racines of *Rumex alpinus*.—Bull. sc. pharmacol. 1911, v. 18, Annexes, p. 10.

Egan, Thos. A., recommends the addition of glycerin to compound tincture of gentian, so as to prevent precipitation.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 291.

The A. Ph. A. Committee on Drug Market reports finding 10 samples of tincture of gentian to give from 10.08 to 5.01 per cent of extractive and 42.6 to 56.4 per cent of alcohol.—Drug Topics, 1911, v. 26, p. 275.

Brunker, J. E., reports that, of 208 samples of compound tincture of gentian examined, the average extractive was 5.5 gm. in 100 mls; alcohol by volume, 42.54; one was defective as to extractive, two as to alcohol.—Brit. & Col. Drug. 1911, v. 60, p. 229.

Bridel, Marc, presents a communication on tincture of gentian prepared from an unfermented root.—J. Pharm. et Chim. 1911, v. 4, pp. 541-542. See *Ibid.* v. 3, pp. 415, 534-539.

Allen and Brewis find for extract of gentian 27.1 per cent of moisture, dried at 100–105°, and 4.22 per cent ash.—Pharm. J. 1911, v. 87, p. 172. Also Chem. & Drug. 1911, v. 79, p. 214.

An unsigned note (J. Am. M. Assoc. 1911, v. 56, p. 1211) on Eighteenth Century materia medica quotes some of the therapy of Herman Boerhaave with reference to gentian.

GERANIUM.

Lloyd, John Uri, points out that cranesbill has long been used as a domestic astringent remedy, and that it is now much valued in Eclectic medication.—Bull. Lloyd Libr. 1911, No. 18, p. 43.

Moffat, John L., in a contribution on some infrequently used eye remedies, states that geranium maculatum is indicated in giddiness with diplopia (better, closing eyes), ptosis, and dilated pupils.—Hahnemann. Month. 1911, v. 46, p. 298.

Covert, Jennie M., reports the successful use of geranium in a case of rodent ulcer.—Ellingwood's Therap. 1911, v. 5, pp. 417–418.

Heeve, William L., gives geranium in cases of chronic diarrhoea with a constant desire to go to stool.—Nat. Eclect. M. Assoc. Quart. 1910–1911, v. 2, p. 121.

GLANDULÆ SUPRARENALÆS SICCÆ.

Wood, H. C., Jr., reports that, if suprarenal glands remain official in the next revision of the Pharmacopœia, some standard of strength should be introduced.—J. Am. M. Assoc. 1911, v. 56, p. 607. Also Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 26–27.

Houghton, E. M., in discussing the physiological testing of drugs, outlines a method of assay and proposes that chemically pure adrenalin crystals be adopted as the final standard by which the value of all products of the suprarenal gland shall be measured.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 177.

Dohme and Engelhardt think that a colorimetric or chemical estimation of the active principles is desirable.—Am. J. Pharm. 1911, v. 83, p. 522.

Hale and Seidell discuss the colorimetric and physiological estimation of the active principle of the suprarenal gland, and call attention to the very wide differences in activity found for the various commercial samples of desiccated gland.—Am. J. Pharm. 1911, v. 83, pp. 551–558.

Vanderkleed, C. E. (U. S. Pat. 1,000,214, Aug. 8, 1911), describes a process for preparing compounds of the suprarenal gland.—J. Soc. Chem. Ind. 1911, v. 30, p. 1087.

Ohliger, W. (U. S. Pat. 1,003,646, Sept. 19, 1911), describes a process for a pharmaceutical product from the suprarenal glands.—*Ibid.* p. 1409.

Macleod and Pearce report the results of their studies in experimental glycosuria; the relationship of the adrenal glands to sugar production by the liver.—*Am. J. Physiol.* 1911, v. 29, pp. 419-435.

Regnault, Jules, presents a note on suprarenal opotherapy in the vomiting of pregnancy.—*Compt. rend. Acad. sc.* 1911, v. 152, p. 1408.

GLANDULÆ THYROIDÆE SICCÆ.

Hunt and Seidell propose a standard iodine content of 0.2 per cent, with a maximum variation of 0.03 per cent above or below this figure. The limit for moisture is placed at 6 per cent and that for ash at 5 per cent.—*Am. J. Pharm.* 1911, v. 83, pp. 407-411.

Bennett, Reginald R., as a standard for desiccated thyroids, proposes a minimum of 0.15 per cent of iodine.—*Year-Book of Pharmacy*, 1911, pp. 410-413.

See also *Pharm. J.* 1911, v. 87, p. 163, and p. 568; *Chem. & Drug.* 1911, v. 79, p. 208; and *Am. J. Pharm.* 1911, v. 83, p. 454.

An editorial (*Lancet*, 1911, v. 181, p. 309) states that the variability in the therapeutic value of thyroid preparations is frequently a source of disappointment to medical practitioners, and the suggestion that an iodine standard be fixed will be welcomed. See also p. 319.

Seidell, Atherton, reports some further experiments upon the determination of iodine in thyroid.—*J. Biol. Chem.* 1911, v. 10, pp. 95-108.

Wood, H. C., Jr., reports the opinion that thyroid gland does not require physiologic standardization, as the work of Hunt has shown that the percentage of combined iodine is an accurate indicator of the quality of the drug.—*J. Am. M. Assoc.* 1911, v. 56, p. 606. Also *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 23.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 70) report on a fine sample of thyroid gland which contained 0.45 per cent fat and 0.44 per cent of iodine in combination, a higher figure than any published record.

Beebe, S. P., discusses the preparation of a thyroid extract for therapeutic purposes.—*Am. J. Pharm.* 1911, v. 83, pp. 56-67.

Hunt, Reid, reports a series of experiments on the relation of the thyroid to diet. *Tr. Am. M. Assoc. Sec. Pharm. & Therap.* 1911, pp. 41-47. Also *J. Am. M. Assoc.* 1911, v. 57, pp. 1032-1033.

v. Aichbergen, Adolf Kutschera, in a discussion on endemic cretinism, its causes and its treatment, discusses the use of the thyroid gland in the treatment of this disease.—*Österr. Sanitätswesen*, 1911, v. 23, Beilagen, pp. 1-198.

Thompson and Swarts contribute a brief paper on the influence of the thyroid and parathyroid glands on the healing of fractures.—*J. Am. M. Assoc.* 1911, v. 57, p. 724.

Roehr, Clarissa M., discusses the nature and uses of the thyroid gland and some of the related products.—*Pacific Pharm.* 1911, v. 5, p. 224.

Richter, P. F., discusses the use of the thyroid gland in the treatment of obesity. *Pharm. Ztg.* 1911, v. 56, pp. 198–199.

An editorial note (*Pharm. J.* 1911, v. 87, p. 550) calls attention to the dangers of thyroid as an antifat.

A number of additional references on the chemistry, pharmacology, and therapeutic uses of the thyroid gland will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Compt. rend. Soc. Biol.*; *Zentralbl. Biochem. u. Biophysik*; and *Chem. Centralbl.*

GLYCERINUM.

Glücksman, C., reviews the history of glycerin and the biography of its discoverer, Carl Wilhelm Scheele.—*Pharm. Prax.* 1911, v. 10, pp. 385–398.

McBride, Harry A., reports that the imports of glycerin into the United States are mainly of the crude article; in 1908 they amounted to 32,481,068 pounds; 1909, 36,248,421 pounds; 1910, 41,181,526 pounds.—*Cons. & Tr. Rep.* Oct. 6, 1911, pp. 81–84.

An editorial (*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 3–4) discusses the economic status of glycerin, the probable origin of glycerin, and the fats from which it is made.

An unsigned article (*Oil, Paint and Drug Reporter*, 1911, v. 80, Oct. 16, p. 28F) calls attention to a review of the glycerin trade of several countries embodied in the various reports recently published.

Düsterbehn, F., calls attention to the tests and requirements for glycerin that are embodied in the *Ph. Germ. V.*—*Apoth.-Ztg.* 1911, v. 26, p. 186.

See also *Pharm. J.*, 1911, v. 86, p. 581.

An unsigned article comments on the requirements for glycerin included in the *Ph. Germ. V.*, and points out that the test for arsenic is particularly important.—*Pharm. Ztg.* 1911, v. 56, p. 806.

Linke, H., asserts that the absence of odor in the examination of glycerin depends entirely on the examiner, and to some extent on the temperature, glycerin having less odor at low temperatures than when warmed.—*Ber. pharm. Gesellsch.* 1911, v. 21, p. 191.

Bosart, L. W., describes and illustrates an improved picnometer for glycerin.—*J. Ind. & Eng. Chem.* 1911, v. 3, p. 508.

Probeck, Eugene, reports his experience with the acetin method for the determination of glycerol.—*Ibid.* pp. 253–254.

Lyons, A. B., suggests that glycerin which is to be used in pharmaceutical preparations should be tested with dilute acid for the absence of a disagreeable odor.—*Am. Druggist*, 1911, v. 58, p. 248.

"C. M." calls attention to an improved test for glycerin, depending on the conversion of glycerin by potassium permanganate into oxalic acid.—D.-A. Apoth.-Ztg. 1911-12, v. 32, p. 18.

Hehner and others present the international standard methods, 1911, for the analysis of crude glycerol.—Analyst, 1911, v. 36, pp. 314-320.

See also Chem. & Drug. 1911, v. 78, p. 511.

Grünewald, W., discusses the analysis of crude glycerin and the desirability of adopting a uniform method for its estimation.—Ztschr. ang. Chem. 1911, v. 24, pp. 865-870.

Wagenaar, M., discusses the determination of glycerin, and presents a table showing the amount of glycerin indicated by varying amounts of N/10 solution of sodium thiosulphate.—Pharm. Weekblad, 1911, v. 48, pp. 497-502.

Bierry, Henri and Ranc present a note on the action of the ultra-violet rays on glycerin.—Compt. rend. Acad. sc. 1911, v. 152, p. 535.

Beythien, Hempel, and others, discuss the estimation of glycerin in fats and in soaps.—Ztschr. Unters. Nahr. u. Genussm. 1911, v. 21, pp. 673-675.

The Chemical News (1911, v. 103, pp. 220, 233) reproduces a report on the analysis of crude glycerin, prepared by a committee appointed by the general meeting of the makers of crude glycerin, London, July 26, 1909. See also J. Soc. Chem. Ind. 1911, v. 30, p. 556.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 34) report that 1 sample of crude glycerin had a specific gravity of 1.3; ash, 15.9 per cent (chiefly chlorides); glycerin, 50.9 per cent.

Sayre, L. E., reports that of 9 samples of glycerin examined 3 were inferior, 1 being off color and 2 giving tests for acrolein.—Bull. Kansas Bd. Health, 1911, v. 7, p. 141.

Smith, Kline & French Co. (Analytical Report, 1911, p. 25) reports that 59 samples of glycerin were examined, and all except 3 contained traces of butyric acid.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 36) report that arsenic, in one sample of foreign distilled glycerin, amounted to 20 parts per million, a proportion seldom now met with in this grade.

The Paris Correspondent (J. Am. M. Assoc. 1911, v. 56, p. 906) calls attention to a recent accident in some military maneuvers and notes the importance of avoiding the packing of glycerin and potassium permanganate near each other in sanitary stores.

Halstead, Albert, quotes, from The Engineer of December 9, that in the past 18 months the price of glycerin has risen over 50 per cent.—Cons. & Tr. Rep. Jan. 16, 1911, p. 190.

An editorial (J. Ind. & Eng. Chem. 1911, v. 3, Jan., p. 3) points out that the manufacture of nitroglycerin explosives is the determining factor in regulating the price of glycerin.

An editorial note (Critic and Guide, 1911, v. 14, p. 346) calls attention to a case of glycerin addiction reported by Schmey of Berlin. It should be remembered that, chemically, glycerin is an "alcohol."

Burges, L., discusses the use of glycerin as an antiphlogistic, applied as a pad by soaking a piece of lint in glycerin.—Practitioner, 1911, v. 87, pp. 243–245.

Baroni, E., discusses the use of hypodermic injections of glycerin.—Boll. chim. farm. 1911, v. 50, pp. 730–734.

A number of additional references on the chemistry, pharmacology, and therapeutic uses of glycerin will be found in Index Med.; J. Am. M. Assoc.; Chem. Abstr.; Zentralbl. Biochem. u. Biophysik; and Chem. Centralbl.

GLYCERITA.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 47) present a compilation of suggested standards and ranges of specific gravity for the official glycerites.

GLYCERITUM BOROGLYCERINI.

Whorton, C., thinks it would be better if the Pharmacopœia would direct constant stirring instead of "occasional stirring," as the skim retards the process and sometimes is hard to get into solution again.—Alabama Pharm. Assoc. 1911, p. 95.

GLYCERITUM FERRI, QUININÆ ET PHOSPHATUM.

Hommell, Philemon E., thinks this preparation should be disposed of. There is no need for a glycerite, as the elixir can be associated with glycerin. Moreover, it is unsatisfactory on account of its tendency to precipitate.—Pract. Drug. 1911, v. 29, July, p. 29.

GLYCYRRHIZA.

Lloyd, John Uri, points out that licorice was mentioned by Dioscorides, and by many writers since his time, and it has long been an article of domestic use, as a "sweet wood" for chewing and as a constituent of medicinal plasters.—Bull. Lloyd Libr. 1911, No. 18, p. 43.

An editorial (Pacific Pharm. 1911, v. 5, p. 223) states that the soil and climatic conditions in the Coachella Valley of California are ideal for the growing of glycyrrhiza. The American *Glycyrrhiza lepidota* Pursh. occurs as a weed in places and should be replaced by the official species.

Mitlacher, Wilhelm, discusses the cultivation of glycyrrhiza in Mähren and presents statistics showing the consumption of the root in the production of extracts during the years 1899–1908.—Pharm. Prax. 1911, v. 10, pp. 289–290.

Rosenthaler, L., points out that the Ph. Germ. V no longer restricts the origin of licorice root to the Russian variety.—*Pharm. Zentralh.* 1911, v. 52, p. 30.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for glycyrrhiza: Water content, 7.98 per cent; ash content, 8.10 per cent; alkalinity of water-soluble ash, 0.96 per cent; total alkalinity of ash, 7.02 per cent—*Proc. Ohio Pharm. Assoc.* 1911, p. 70.

Eriksson, Ella, presents some experimental results on the determination of glycyrrhizin and of sugars in powdered glycyrrhiza and in extract of glycyrrhiza. The glycyrrhizin content of 6 varieties of licorice root was found to vary from 6.49 to 8.15 per cent.—*Arch. Pharm.* 1911, v. 249, pp. 144–160. See also p. 240 for correction; also *Schweiz. Wehnschr. Chem. u. Pharm.* 1911, v. 49, pp. 529–536.

Schneider, Albert, reports on a sample of licorice which was adulterated.—*Pacific Pharm.* 1911, v. 5, p. 178.

An editorial note (*Pharm. J.* 1911, v. 86, p. 616) states that, according to the report of the Local Government Board for Scotland, 1 sample of ground liquorice was found to be adulterated.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 47) report on 5 samples of liquorice root which were found to leave 3.6 to 4.4 per cent of ash.

Behre, A., discusses the determination of saponin and of glycyrrhizin in soft drinks, according to the methods of Vamvakas and Frehse.—*Ztschr. Unters. Nahr. u. Genussm.* 1911, v. 22, pp. 498–506.

Diekman, George C., reports an improved formula for fluid extract of glycyrrhiza in which the glycerin is omitted.—*Proc. New York Pharm. Assoc.* 1911, p. 87.

Brunker, J. E., reports that of 27 samples of fluid extract of glycyrrhiza examined the average extractive was 40.6 gm. in 100 mls; alcohol by volume, 18.4 per cent; one was defective as to extractive.—*Brit. & Col. Drug.* 1911, v. 60, p. 229.

Grazer, Fred A., reports some observations on compound mixture of glycyrrhiza and presents a modified formula for Tilyard's compound mixture.—*Merck's Rep.* 1911, v. 20, pp. 311–312. See also *Pharm. Era*, 1911, v. 44, p. 193.

The editor of the "Therapeutics Column" condemns brown mixture and considers it a shame to continue to give bad-tasting sugar preparations in the attempt to combine prescriptions for coughs.—*J. Am. M. Assoc.* 1911, v. 57, p. 2139.

Elliott, George, calls attention to the incompatibility of a mixture containing calcium chloride and extract of licorice.—*Chem. & Drug.* 1911, v. 78, p. 283. Also *Brit. & Col. Drug.* 1911, v. 59, p. 153.

See also under *Extractum Glycyrrhizæ*.

GOSSYPH CORTX.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for gossypii cortex: Water content, 8.93 per cent; ash content, 7.19 per cent; alkalinity of water soluble ash, 1.47 per cent; total alkalinity, 6.19 per cent.—*Proc. Ohio Pharm. Assoc.* 1911, p. 70.

Lloyd, John Uri, states that cotton root bark is used as a stimulant and emmenagogue, the decoction being considered, in the days of American slavery, capable of producing abortion. It was thus introduced empirically by the negroes and came from thence into the hands of the profession, being first employed by physicians of the Southern United States.—*Eclectic Med. Glean.* 1911, v. 7, pp. 407–408. See also *Bull. Lloyd Libr.* 1911, No. 18, p. 43.

Wood, H. C., Jr., reports the opinion that gossypii cortex seems of too little importance to require physiologic standardization.—*J. Am. M. Assoc.* 1911, v. 56, p. 606.

Scott, John C., reports a study on the action of gossypii cortex upon the uterine contractions and presents two tracings to show that the drug acts as well on the excised uterus as on the uterus with blood and nerve supply intact.—*Therap. Gaz.* 1911, v. 35, pp. 162–163.

Baird, O. C., states that gossypium may be noted for its kindly action upon the system and is not unpleasant. Its entire field has been in times past as an emmenagogue. He knows of no other remedy that is so certain in its action.—*Nat. Eclect. M. Assoc. Quart.* 1910–11, v. 2, pp. 302–303.

Webster, Herbert T., states that gossypium is slow in its action in chronic cases. Its entire field has been in times past as an emmenagogue.—*Hahnemann. Month.* 1911, v. 46, p. 799.

GOSSYPH PURIFICATUM.

Hartwich, C., points out that the Ph. Germ. V provides a limit for the width, as well as the length, of cotton fibers.—*Apoth.-Ztg.* 1911, v. 26, p. 22.

Kilmer, Fred B., discusses the U. S. P. requirements for purified cotton.—*Proc. New Jersey Pharm. Assoc.* 1911, pp. 61–62. Also *Am. J. Pharm.* 1911, v. 83, p. 418.

Roescheisen, W., discusses the crackling nature of some specimens of absorbent cotton and asserts that this property, although popularly demanded, is neither desirable nor necessary.—*Pharm. Ztg.* 1911, v. 56, p. 67. See also pp. 87, 97, 127, 128, 920, 961.

Moreul, Th., ridicules the idea that "crackling" is any indication of the true quality of cotton.—*Bull. sc. pharmacol.* 1911, v. 18, p. 587.

Kilmer, Fred B., in commenting on the use of cotton in surgery in the United States, presents the following table showing the annual consumption of surgical dressings:

	1878	1886	1896	1910
Raw cotton.....pounds..	1,000	5,000	20,000	25,000
Absorbent cotton.....do...	5,000	250,000	3,000,000	5,000,000
Bandages.....do.....	10,000	20,000	100,000	200,000
Gauze.....yards.....	1,200	120,000	20,000,000	50,000,000
Lint.....pounds.....	50,000	45,000	40,000	40,000
Miscellaneous dressings.....do...	500	2,000	20,000	35,000

—Proc. New Jersey Pharm. Assoc. 1911, p. 59. Also Am. J. Pharm. 1911, v. 86, pp. 414-424.

Astruc and Bouisson present a note on the official antiseptic gauzes and commend the Codex Commission for providing in certain cases a higher and a lower limit rather than a fixed proportion of the active ingredient.—Bull. pharm. Sud-Est, 1911, v. 16, pp. 33-35.

Kilmer, Fred B., discusses standard surgical dressings, and concludes that the rapidly changing conditions of surgical methods would not seem to warrant the insertion in the Pharmacopœia or the National Formulary of formulas for the preparation of antiseptic surgical dressings.—Proc. New Jersey Pharm. Assoc. 1911, pp. 57-66.

For additional references, see Chem. Abstr.; Exper. Sta. Rec.; and Chem. Centralbl.

GRANATUM.

Lloyd, John Uri, states that the pomegranate has been in cultivation, and the fruit has been esteemed a delicacy, from the most ancient time. The medicinal properties of the different parts of the plant were known to Theophrastus, Dioscorides, and other early authors.—Bull. Lloyd Libr. 1911, No. 18, pp. 44-45. Also Am. J. Pharm. 1911, v. 83, pp. 211-213.

Hartwich, C., points out that the Ph. Germ. V requires that pomegranate bark contain a minimum of 0.4 per cent of mixed alkaloids, having an average molecular weight of 148. He also points out that the requirements of the Ph. Fr. and Ph. Ndl. of 0.25 per cent are decidedly too low.—Apoth.-Ztg. 1911, v. 26, p. 6.

See also Pharm. J. 1911, v. 86, pp. 295-296, and Chem. & Drug. 1911, v. 78, p. 632.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 95-97) discuss the valuation of pomegranate bark, and present a table showing the alkaloid requirements and the ash limits included in the several pharmacopœias.

Glücksman, C., outlines a new identification reaction with lead acetate for extract of pomegranate.—Pharm. Prax. 1911, v. 10, pp. 441–445. Also J. Pharm. et Chim. 1911, v. 4, p. 462.

Dohme and Engelhardt state that the total alkaloids in pomegranate bark can easily be estimated.—Am. J. Pharm. 1911, v. 83, p. 522.

Luftensteiner, Hans, in a contribution on anthelmintics, discusses the nature of pomegranate bark and presents some observations on the chemistry of pelletierine, isopelletierine, methylpelletierine, and pseudopelletierine.—Pharm. Prax. 1911, v. 10, pp. 139–141.

Caesar & Loretz (Jahres-Bericht, 1911, p. 21) report that the alkaloid content of the air-dry drug was found to vary from 0.097 to 0.270 per cent. The alkaloid content for the root bark varies from 0.205 to 0.487 per cent in the air-dry drug.

Wood, H. C., Jr., calls the attention to Brüning's method (Ztschr. exper. Pharm. u. Therap. 1905, v. 3, pp. 564–587) for determining the vermicide effect of pomegranate on intestinal worms. Though he is not inclined to recommend the introduction of a physiologic test for this drug.—J. Am. M. Assoc. 1911, v. 56, p. 606.

GRINDELIA.

Lloyd, John Uri, states that grindelia, in its various forms, early attracted the attention of the Jesuit Fathers in their mission stations along the Pacific coast, it being used by the natives before the conquest of the country by the Americans.—Bull. Lloyd Libr. 1911, No. 18, p. 45.

Henkel, Alice, describes and illustrates (1) *Grindelia robusta* Nutt., (2) *Grindelia squarrosa* (Pursh.) Dunal, and gives synonyms, other common names, habitat, range, and data as to collection, prices, and uses.—Bull. Bur. Plant Ind. U. S. Dept. Agric. 1911, No. 219, p. 37.

An editorial (Therap. Gaz. 1911, v. 35, pp. 179–180) calls attention to the possible use of *grindelia robusta* in the treatment of asthma.

Moffat, John L., in a contribution on some infrequently used eye remedies, states that grindelia is indicated in pain in eyeballs, running back to brain; worse, moving eyes. Pupils dilated.—Hahnemann. Month. 1911, v. 46, p. 298.

Rabe, R. P., states that grindelia is indicated in cases of asthma when dropping asleep.—*Ibid.* p. 399.

GUAIACOL.

Murray, B. L., points out that the U. S. P. recognizes both the solid and the liquid guaiacol. Since it is not chemically pure, a variation is allowed in the specific gravity of the liquid article, the figures being specific gravity 1.110 to 1.114, but in boiling point it

must behave like the chemically pure article, for the test says "boiling at 205° C.," which is the temperature for boiling of the chemically pure.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 13.

Poulenc, Camille, reports a suggested correction in the melting point, 28° to 29°.—*J. Pharm. et Chim.* 1911, v. 4, p. 439.

Coblentz, Virgil, reports that samples of guaiacol were below the U. S. Pharmacopœia standard, varying from 45 to 60 per cent of true guaiacol.—*J. Ind. & Eng. Chem.* 1911, v. 3, p. 540. Also *Pract. Drug.* 1911, v. 29, Apr. p. 29.

Whitney, D. V., reports a sample of guaiacol in original package, but not labeled pure or U. S. P., which contained creosote.—*Proc. Missouri Pharm. Assoc.* 1911, p. 96.

An editorial note (*Critic and Guide*, 1911, v. 14, p. 228) states that guaiacol (50 per cent in olive oil) makes an excellent application to gouty joints and venereal buboes.

A number of additional references on the chemistry and therapeutic uses of guaiacol will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; and *Chem. Centralbl.*

GUAIACOLIS CARBONAS.

An editorial (*Pharm. Ztg.* 1911, v. 56, p. 572) points out that the Ph. Germ. V includes duotal as a synonym for guajacolum carbonicum.

Düsterbehn, F., notes that the Ph. Germ. V provides tests for guaiacol, chlorides, inorganic and organic contaminations.—*Apoth.-Ztg.* 1911, v. 26, p. 192.

See also *Pharm. J.*, 1911, v. 86, p. 581.

Fernau, Albert, discusses the identification of creosote and of guaiacol carbonate.—*Ztschr. allg. österr. Apoth.-Ver.* 1911, v. 49, p. 165.

GUAIACUM.

Lloyd, John Uri, states that guaiacum was known early in the sixteenth century and was used by the natives long before its introduction in Europe to the medical profession.—*Bull. Lloyd Libr.* 1911, No. 18, p. 45.

Rusby, H. H., suggests that, owing to the liability of guaiac to contain excessive amounts of wood and bark tissue and other impurities, the allowable limit of insoluble matter should be specified.—*Pharm. Era*, 1911, v. 44, p. 140.

Francis, J. M., reports that of 10 samples of guaiac examined 2 were deficient in alcohol-soluble resin, testing 59.6 and 75 per cent soluble instead of the required 85 per cent.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 124.

Bernegau, L. H., reports that of 8 samples of guaiac examined 4 were deficient in alcohol-soluble resin, testing 71.3 to 79.2 per cent soluble; 1 of the 8 tested 4.76 per cent ash, thus slightly exceeding

the U. S. P. limit of 4 per cent.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 124.

Ferguson, George A., reports on 3 samples of gum guaiac varying from 0.20 to 2.42 per cent in ash, 0.34 to 16.39 per cent in alcohol-insoluble matter, and having acid numbers from 72.46 to 78.03.—Proc. New York Pharm. Assoc. 1911, p. 152.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 35) report on 2 samples of guaiac resin, the acid value (indirect) of which was 56 and 44.8, the acid value (alcoholic soluble portion) 66 and 63.5, solubility in petroleum ether 0.7 and 2.6 per cent, and 20 and 29.5 per cent insoluble in 90 per cent alcohol, respectively.

Brunker, J. E., reports that of 8 samples of ammoniated tincture of guaiac examined the average extractive was 15.96 gm. in 100 mls; alcohol by volume, 71.4 per cent.—Brit. & Col. Drug. 1911, v. 60, p. 229.

Sartory, A., presents a note on certain reactions furnished by the tincture of guaiac.—Compt. rend. Soc. Biol. 1911, v. 70, p. 895.

Spencer, J. R., states that tincture of guaiac has been used successfully in the treatment of amenorrhœa, dysmenorrhœa, and some other uterine troubles.—Nat. Eclect. M. Assoc. Quart. 1910–11, v. 2, pp. 297–298. Also Eclectic Med. Glean. 1911, v. 7, pp. 439–441.

Moffat, John L., in a contribution on some infrequently used eye remedies, states that guaiacum is indicated when pupils are dilated. Eyelids appear too short. Pimples around eyes.—Hahnemann. Month. 1911, v. 46, p. 298.

GUARANA.

Lloyd, John Uri, states that guarana was introduced into France from South America by a French officer in 1817, the paste being made and used by the tribe of Indians (Guaranis) from whom it took its name.—Bull. Lloyd Libr. 1911, No. 18, p. 46.

Glücksman, C., discusses the determination of the tannin content of guarana by means of formaldehyde.—Pharm. Prax. 1911, v. 10, pp. 456–457.

Rosenthaler, L., describes and illustrates the nature of the material obtained from guarana by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, p. 532.

Noyes, C. R., points out that the U. S. P. requires guarana to contain 3.5 per cent and the fluid extract of guarana 3.5 per cent of alkaloidal principles.—Proc. Minnesota Pharm. Assoc. 1911, p. 77.

The Editor of the "Therapeutics" column (J. Am. M. Assoc. 1911, v. 56, p. 1331) notes that guarana, sooner or later, upsets the appetite and causes dyspepsia. It is used for ordinary migraine headache and in nervous and menstrual headaches, and also sometimes is used as a restorative after a drinking debauch. A guarana habit can be formed.

HÆMATOXYLON.

Lloyd, John Uri, quotes Flückiger as stating that logwood was introduced into England in the latter half of the sixteenth century and that in 1581 its use was abolished by act of Parliament, for the reason that it was considered a poor substitute for better dyes and was viewed in the light of a sophisticant.—Bull. Lloyd Libr. 1911, No. 18, p. 46.

Harris, William, asserts that few trees have become so completely naturalized as the logwood. It was introduced from Honduras, by Barham, in 1715.—Bull. Dept. Agric. Jamaica, 1911, v. 1, No. 4, p. 247.

HAMAMELIDIS CORTEX.

Lloyd, John Uri, states that the decoctions and infusions of witch-hazel have been in common use from the days of the American Indian, whose use of the plant led the settlers to its employment.—Bull. Lloyd Libr. 1911, No. 18, p. 47.

Henkel, Alice, describes and illustrates witchhazel, *Hamamelis virginiana* L., also gives synonyms, other common names, the habitat and range, and some data on the collection, prices, and uses.—Bull. Bur. Plant Ind. U. S. Dept. Agric. 1911, No. 219, p. 12.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for hamamelidis cortex: Water content, 9.39 per cent; ash content, 5.68 per cent; alkalinity of water-soluble ash, 0.47 per cent; total alkalinity of ash, 7.79 per cent.—Proc. Ohio Pharm. Assoc. 1911, p. 70.

AQUA HAMAMELIDIS.

Diekman, George C., reports the recommendation that hamamelis water be transferred to the N. F., or at least directions for making it should be omitted.—Proc. New York Pharm. Assoc. 1911, p. 80.

Brown, L. A., reports examining a sample of witchhazel which was found to contain 2.6 per cent of methyl alcohol.—Bull. Kentucky Agric. Exper. Sta. 1911, October, pp. 25–33.

Dunlap, Renick W., reports that of 3 samples of witchhazel examined, 2 were not passed.—Rep. Ohio Dairy & Food Com. 1910, 1911, p. 48.

HAMAMELIDIS FOLIA.

Glücksman, C., presents a new identification reaction with water of ammonia for fluid extract of hamamelis.—Pharm. Prax. 1911, v. 10, pp. 491–492.

HEDEOMA.

Lloyd, John Uri, states that American pennyroyal was used by the Indians in the form of decoctions and infusions, and was introduced by them to the settlers, coming thence to the attention of the medical profession.—Bull. Lloyd Libr. 1911, No. 18, p. 47.

Henkel, Alice, describes and illustrates pennyroyal, *Hedeoma pulegioides* (L.) Pers., also gives synonyms, other common names, the habitat and range, and some data on the collection, prices, and uses.—Bull. Bur. Plant Ind. U. S. Dept. Agric. 1911, No. 219, p. 26.

Holmes, E. M., asks for information as to the origin of the "penny" in the word "pennyroyal" and gives some interesting notes on the history of *Pulegium*.—Pharm. J. 1911, v. 87, p. 616. See *Ibid.* pp. 652, 700.

HEXAMETHYLENAMINA.

An editorial (Pharm. Ztg. 1911, v. 56, p. 572) points out that the Ph. Germ. V includes urotropin as a synonym for hexamethylenetetraminum.

An unsigned article (N. A. R. D. Notes, 1911-12, v. 13, p. 813) outlines a process for making hexamethylenamine experimentally.

Düsterbehn, F., notes that the Ph. Germ. V describes hexamethylenetetramine as occurring as a colorless, crystalline powder. It is volatilized on heating without melting and dissolves in 1.5 parts of water and in 10 parts of alcohol.—Apoth.-Ztg. 1911, v. 26, p. 193.

See also Pharm. J. 1911, v. 86, p. 581.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 36) point out that hexamethylenetetramine according to the Ph. Germ. V reddens litmus, whereas samples examined here always blue litmus, even in solution in absolute alcohol, although giving no color with phenolphthalein, results to be anticipated from the autobasicity allowed for by Legler.

Cohn, G., discusses the chemistry of hexamethylenetetramine and of some of its combinations with iodine and with phenols.—Pharm. Zentralh. 1911, v. 52, pp. 1173-1179, 1230-1236.

Seel and Friedrich report the examination of a number of samples of tablets of hexamethylenamine, and call attention to the variable nature of some of the commercial products.—*Ibid.* pp. 1120-1121.

Smith, Kline & French Co. (Analytical Report, 1911, p. 25) reports that of the 12 samples of hexamethylenamine examined 1 was rejected on account of its inferior appearance.

Schröter, F., discusses the quantitative estimation of hexamethylenamine in urine.—Arch. exper. Path. u. Pharmakol. 1910-11, v. 64, pp. 161-166.

Dixon, W. E., states that the condition of the urine is of paramount importance during the administration of urotropin.—Pharm. J. 1911, v. 87, p. 16.

Miller, Austin, contributes a note on hexamethylenamine as a remedy for common colds.—J. Am. M. Assoc. 1911, v. 56, p. 1718.

Bagby, B. B., reports continued improvement in a pellagra patient to whom he administered hexamethylenamine.—*Ibid.* p. 1280.

Shattuck, F. C., discusses hexamethylenamine as a possible preventive of pneumococcus empyema.—*Boston M. & S. J.* 1911, v. 164, p. 842.

Gundrum, F. F., discusses the hypodermic use of hexamethylenamine.—*Merck's Arch.* 1911, v. 13, pp. 290-291.

Merck, E. (*Ann. Rep.* 1911, v. 25, p. 262), calls attention to some of the recent literature on hexamethylenamine.

For additional references see *Index Med.* and *J. Am. M. Assoc.*

HOMATROPINÆ HYDROBROMIDUM.

Düsterbehn, F., points out that the Ph. Germ. V gives the melting point of homatropine hydrobromide as approximately 214°, although Schneider-Süss gives it as being from 190 to 192°.—*Apoth.-Ztg.* 1911, v. 26, p. 193.

See also *Pharm. J.* 1911, v. 86, p. 581.

Bolland, A., reports observations on the microchemical behavior of homatropine.—*Monatsh. Chem.* 1911, v. 32, pp. 121-122.

HUMULUS.

Lloyd, John Uri, states that hop gardens existed in France and Germany in the eighth and ninth centuries. The original use of hops was in decoction as a stomachic medicine.—*Bull. Lloyd Libr.* 1911, No. 18, p. 47.

Galloway, B. T., reports on the hop breeding work in California.—*Ann. Rep. U. S. Dept. Agric.* 1911-12, p. 276.

Koch, Felix J., describes a trip through America's great western hop land and discusses the method of cultivating and harvesting hops.—*Merck's Rep.* 1911, v. 20, pp. 32-33. See also *Western Druggist*, 1911, v. 33, p. 82.

Gehe & Co. (*Handelsbericht*, 1911, pp. 73-74), in a discussion on the market conditions of hops, present a table showing the production of hops in the several hop producing countries during the years 1909 and 1910.

Ifft, George Nicolas, reports that the world's crop of hops for 1911 was 1,328,000 cwt., as against 1,557,000 cwt. for 1910.—*Cons. & Tr. Rep.* November 8, 1911, p. 700.

See also *J. Ind. & Eng. Chem.* 1911, v. 3, p. 953.

Heinrich Haensel (*Bericht*, Oct.-Apr. 1910-11, p. 22) reports that the German hop crop is the largest for five years.

Rusby, H. H., asserts that the practice of removing a large part of the lupulin from hops, and then selling the latter as genuine, is very common and can not be too heartily condemned. It is forbidden by the present definition, but no adequate provision is made for its detection.—*Pharm. Era*, 1911, v. 44, p. 140.

Deussen, Ernst, reports observations on the chemical and physical characteristics of humulene, one of the constituents of oil of hops.—*J. prakt. Chem.* 1911, v. 83, pp. 483–489.

Biró, Gustav, discusses the estimation of *a*-bitter acid in Hungarian hops; 33 samples were found to vary from 1.76 to 4.89 per cent, the average content being 3.38 per cent.—*Ztschr. Unters. Nahr. u. Genusssm.* 1911, v. 22, p. 607.

Moufang and Scheer (*Woch. Brau.* 1911, v. 28, pp. 449–452) discuss the valuation of hops by analysis.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 1226.

Wiegmann, D. (*Ann. Brass. et Dist.* 1911, pp. 90, 256), discusses the bitter substances in hops.—*Ann. falsif.* 1911, v. 4, pp. 217, 452. See also *J. Soc. Chem. Ind.* 1911, v. 30, p. 640.

Brown and Ward (*J. Inst. Brewing*, 1910, v. 16, pp. 641–664) outline a method for the valuation of the antiseptic properties of hops.—*Analyst*, 1911, v. 36, p. 65. Also *J. Soc. Chem. Ind.* 1911, v. 30, p. 102.

Nilson, A. (*U. S. Pat.* 978,476, Dec. 13, 1910), describes a hop extraction process. *J. Soc. Chem. Ind.* 1911, v. 30, p. 103.

An unsigned article (*New Idea*, 1911, v. 33, pp. 114–115) calls attention to the possible use of hops as a remedy for sleeplessness.

HYDRARGYRI CHLORIDUM CORROSIVUM.

Düsterbehn, F., points out that the *Ph. Germ. V* describes corrosive mercuric chloride as occurring in heavy, white, transparent, rhombic crystals or as crystalline pieces, and that the solubility in ether is given as 1:17, formerly 1:12–14.—*Apoth.-Ztg.* 1911, v. 26, p. 193. See also *Pharm. J.* 1911, v. 86, p. 581, and *Chem. & Drug.* 1911, v. 78, p. 13.

The Paris Pharmaceutical Society recommends a further study of the solubility of mercuric bichloride in officinal ether.—*J. Pharm. et Chim.* 1911, v. 4, p. 537.

Johnson, F. M. G., reports observations on the vapor pressure of mercuric chloride, bromide, and iodide; describes and illustrates the apparatus used; and presents a diagram showing the results of his observations.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 777–781.

Proctor and Seymour-Jones present a note on the estimation of soluble mercuric salts at great dilutions.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 404.

An unsigned review of the *Ph. Germ. V* (*Pharm. J.* 1911, v. 86, p. 654) points out that the mercury is now determined volumetrically.

Smith, Carl E., discusses the volumetric determination of mercury in tablets of mercuric chloride.—*Am. J. Pharm.* 1911, v. 83, p. 313. See also *Chem. Eng.* 1911, v. 14, p. 474.

The Committee of Reference in Pharmacy (Third Report, p. 7) states that liquor hydrargyri perchloridi should be directed to be protected from light, as it otherwise undergoes slight alteration. See also Pharm. J. 1911, v. 87, p. 590.

Scheringa, K., reports observations on the influence of light and the preserving action of colored glass on solutions of corrosive sublimate.—Pharm. Weekblad, 1911, v. 48, pp. 25–27.

Herzog and Betzel report some observations on the disinfectant properties of mercuric chloride.—Ztschr. physiol. Chem. 1911, v. 74, pp. 226–230.

Burton, A. W., reports a fatal case of acute mercurial poisoning, in which death was somewhat delayed, with notes of the necropsy.—Lancet, 1911, v. 181, p. 297.

Mabbott, J. Milton, reports a case of mercuric chloride poisoning associated with secondary hæmorrhage from a vaginal douche given seven days after delivery.—J. Am. M. Assoc. 1911, v. 57, p. 448.

An editorial (Brit. M. J. 1911, v. 2, p. 938) comments on a report of 3 cases of fatal mercurial poisoning from the use of bichloride tablets in the vagina.

Noguchi and Bronfenbrenner discuss the action of corrosive sublimate and the serum diagnosis of syphilis.—J. Exper. M. 1911, v. 13, pp. 210–216.

A number of additional references on the use of mercuric chloride will be found in Index Medicus.

HYDRARGYRI CHLORIDUM MITE.

An unsigned review (Chem. & Drug. 1911, v. 78, p. 13) of the Ph. Germ. V states that a proposed requirement of the Ph. Brit. is that water shaken with mercurous chloride should not be darkened by H_2S , while the Ph. Germ. V requires that alcohol (69 per cent) shaken with it should not be altered by H_2S , or become more than slightly opalescent on the addition of solution of silver nitrate.

Smith and Menzies, in a contribution on vapor pressures, report observations on the vapor pressure of dry calomel.—Ztschr. physik. Chem. 1911, v. 76, pp. 713–720.

An editorial note (J. Am. M. Assoc. 1911, v. 56, p. 287) discusses the incompatibility of antipyrine, calomel, and sodium bicarbonate. See also Rep. Chem. Lab. Am. M. Assoc. 1911, v. 4, pp. 72–75.

Federici, E., replies to a criticism by De Bella of his observations on the incompatibility of calomel and sodium chloride. (See also Digest of Comments for 1910.) Boll. chim. farm. 1911, v. 50, pp. 314–315.

Fleckseder, Rudolf, in a contribution on the action of calomel in the animal organism, discusses calomel diuresis.—Arch. exper. Path. u. Pharmakol. 1911, v. 67, pp. 409–426.

Meyer, Erich, in discussing the use of diuretics, reports some practical observations in the use of calomel.—*Therap. Monatsh.* 1911, v. 25, p. 14.

Additional references on the use of mercurous chloride will be found in *Index Med.*; and *J. Am. M. Assoc.*

HYDRARGYRI IODIDUM FLAVUM.

Smith, Kline & French Co. (Analytical Report, 1911, p. 25) reports that 2 of the 5 samples of yellow iodide of mercury examined contained an excessive amount of mercuric iodide.

The Biennial Report of the Inspection of Pharmacies, 1909-10, notes that the yellow mercurous iodide is poorly prepared and contains mercuric iodide.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 235, and *J. Pharm. Anvers*, 1911, v. 67, p. 523.

Glenn, W. F., feels that we can hope for less good from protoiodides than from any other preparation of mercury.—*J. Am. M. Assoc.* 1911, v. 56, p. 1355.

HYDRARGYRI IODIDUM RUBRUM.

Düsterbehn, F., points out that the Ph. Germ. V gives the solubility of mercuric iodide in alcohol as 1:250, and refers to the ready solubility of this preparation in solutions of potassium iodide.—*Apoth.-Ztg.* 1911, v. 26, p. 193. See also *Pharm. J.* 1911, v. 86, p. 581.

The Paris Pharmaceutical Society suggests a verification of the solubility of mercuric iodide in 90 per cent alcohol at 15° and at the boiling point.—*J. Pharm. et Chim.* 1911, v. 4, p. 538.

Hallaway, Robert R., criticizes Adam's process (Year-Book of Pharmacy, 1910) for the determination of mercuric iodide in the ointment. He prefers Rupp's process, which he outlines.—*Chem. & Drug.* 1911, v. 78, p. 445.

HYDRARGYRI OXIDUM FLAVUM.

Labesse calls attention to the confusion as to what is meant by yellow precipitate; he suggests that the physician should never use this term when prescribing mercuric oxide.—*Répert. pharm.* 1911, v. 23, pp. 200-203.

An unsigned review (*Chem. & Drug.* 1911, v. 78, p. 13) of the Ph. Germ. V states that a nonvolatile residue, 0.5 per cent, is proposed for the Ph. Brit., while the Ph. Germ. V requires not more than 0.1 per cent.

The Paris Pharmaceutical Society suggests a modified and more specific phraseology of the Codex assay method.—*J. Pharm. et Chim.* 1911, v. 4, p. 538.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 37) report that they have had to reject a considerable number of par-

of both red and yellow oxides of mercury on account of excessive nonvolatile residue.

The Ph. Germ. V provides a formula for the preparation of yellow mercuric oxide which must gradually convert itself into a white crystalline powder on shaking with solution of oxalic acid.—Chem. & Drug. 1911, v. 78, p. 13.

Dunn, W. R., in a paper on home-made chemicals, states that he has prepared yellow oxide of mercury, for an eye ointment, by the interaction of corrosive sublimate and sodium hydroxide in solution, collecting the precipitate on a calico filter and drying at a low temperature.—Brit. & Col. Drug. 1911, v. 60, p. 57.

Boa, Peter, is not prepared to recommend that the ointment of yellow mercuric oxide be prepared with the oxide newly precipitated and while yet moist. The official formula he considers more accurate. If moisture is advantageous, a few drops used to rub down the oxide before admixture with the soft paraffin will be efficient.—Pharm. J. 1911, v. 86, p. 407.

Romeyer, J., presents a note on the ointment of yellow oxide of mercury and suggests a formula, using anhydrous lanolin.—Répert. pharm. 1911, v. 23, pp. 394–397.

Diekman, George C., reports that there is no reason why both ointments of oxide of mercury should be official. The red, if properly made, becomes the yellow anyhow, and under careless manipulation is very inferior.—Proc. New York Pharm. Assoc. 1911, p. 82.

Raubenheimer, Otto, does not think that the substitution of yellow oxide of mercury ointment for the red can be safely accomplished. People have been used so long to the red precipitate that it is utterly impossible to substitute the yellow in its place.—*Ibid.* p. 95.

HYDRARGYRI OXIDUM RUBRUM.

An unsigned review (Chem. & Drug. 1911, v. 78, p. 13) of the Ph. Germ. V states that a nonvolatile residue, 0.3 per cent, is proposed for the Ph. Brit., while the Ph. Germ. V requires not more than 0.1 per cent. It also requires that red mercuric oxide should not contain any of the yellow variety and provides a test.

The Biennial Report of the Inspection of Pharmacies, 1909–10, states that red oxide of mercury is contaminated with nitrate.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 235, and J. Pharm. Anvers, 1911, v. 67, p. 523.

Boa, Peter, states that red mercuric oxide in very fine powder is no longer red; the official description is therefore a misnomer.—Pharm. J. 1911, v. 86, p. 407.

An unsigned article (Am. Druggist, 1911, v. 58, p. 139) points out that the unguentum hydrargyri rubrum of the Ph. Germ. V is of 10 per cent strength, prepared with white petrolatum. An assay process is also given.

See also Pharm. J. 1911, v. 86, p. 655.

Wild, R. B., states that red mercuric oxide ointment is largely used for the treatment of pediculi, and a marked inferiority is found in the official ointment with a paraffin base, when used for this purpose, as compared with a lard or simple ointment base.—Brit. M. J. 1911, v. 2, p. 162.

Smith, Carl E., outlines a method for determining mercury in ointment of red mercuric oxide.—Am. J. Pharm. 1911, v. 83, p. 315. Also Chem. Eng. 1911, v. 14, p. 474.

HYDRARGYRUM SALICYLATE.

Craig, Hugh, reports the opinion that there is a question as to what sort of mercuric salicylate will be recognized, and the suggestion that the official form should be a very fine powder.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 607.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 581) points out that mercuric salicylate is now required to contain not less than 54.7 per cent of mercury (representing 92 per cent of real mercuric salicylate), instead of 59 per cent. The percentage of mercury is now determined volumetrically by means of iodine solution, instead of gravimetrically by precipitation as sulphide.

Smith, Carl E., outlines a method for the volumetric determination of mercury in mercuric salicylate.—Am. J. Pharm. 1911, v. 83, p. 314. Also Chem. Eng. 1911, v. 14, p. 474.

An editorial (Merck's Arch. 1911, v. 13, p. 132) outlines a method for dissolving mercuric salicylate.

HYDRARGYRUM.

The Consular and Trade Reports (Aug. 25, 1911, p. 873) quotes from an announcement of the Geological Survey that of the 19 mines producing quicksilver in the United States, 15 are in California, 2 in Nevada, and 2 in Texas.

Plaut, Albert, thinks that crude materials such as metallic mercury should be omitted as independent captions.—Pharm. Era, 1911, v. 44, p. 12.

Murray, B. L., points out that the U. S. P. requires that, in testing metallic mercury, 5 gm. of mercury be boiled with 5 cc. of water and 4.5 gm. of sodium thiosulphate in a test tube. The mercury boils at about 357°, while the aqueous liquid boils somewhere near 125°. Either one can be boiled alone, but they do not boil together. Probably it was intended to boil only the aqueous portion, which can be done, but the text does not say this definitely.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 14.

Düsterbehn, G., notes that the Ph. Germ. V requires that mercury congeal at about -39°, boil at 357°, and have a specific gravity of 13.56.—Apoth.-Ztg. 1911, v. 26, p. 193.

See also Pharm. J. 1911, v. 86, p. 581.

Bryant, E. G., contributes a brief note on purifying mercury in the laboratory.—Chem. News, 1911, v. 104, p. 149.

See also Dunn, J. T., *Ibid.* p. 221, and Estreicher, Tad, p. 269.

Lewis, Wm. C. McC., in a contribution to the study of fluid condition, discusses the compressibility of mercury.—Ztschr. physik. Chem. 1912, v. 79, pp. 185–195.

Brunetti, W., reports observations on chemical changes taking place in preparations of mercury when in contact with organic substances.—Ztschr. Unters. Nahr. u. Genussm. 1911, v. 21, pp. 92–94.

An unsigned article (Am. Druggist, 1911, v. 58, p. 137) states that in the case of galenical preparations of mercury, the Ph. Germ. V has included a volumetric method of assay to determine the amount of metal present.

Rupp, E., comments on the Ph. Germ. V method for the estimation of mercury and calls attention to some of the precautions to be observed.—Apoth.-Ztg. 1911, v. 26, p. 357.

Smith, Carl E., discusses the volumetric determination of mercury.—Am. J. Pharm. 1911, v. 83, pp. 311–315. Also Chem. Eng. 1911, v. 14, p. 474.

Toggenburg, F., reports some observations on the volumetric determination of mercury according to Denigès' method (Bull. soc. chim. 3, 1896, 862; C.-B. 1896, II. 514). Schweiz. Wehnschr. Chem. u. Pharm. 1911, v. 49, pp. 641–644.

Reinthaler, F., reports observations on the volumetric determinations of salts of mercury depending on their reduction to metallic mercury.—Chem. Ztg. 1911, v. 35, pp. 593–595.

Cowie, W. B., outlines a method for the volumetric determination of mercury in mercurial preparations.—Pharm. J. 1911, v. 87, p. 885, and Chem. & Drug. 1911, v. 79, p. 956.

Smith, Kline & French Co. (Analytical Report, 1911, p. 25) reports that 5 samples of mercury were examined and 2 were found to be abnormal in the amount of foreign metals present.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 50) report an examination of 7 samples of mercury, 2 of which failed to answer the thiosulphate test for contamination, 1 old sample containing as much as 2 per cent zinc.

Fleissig discusses the making of gray oil, and of oil suspensions of mercuric salicylate and of calomel.—Pharm. Ztg. 1911, v. 56, pp. 901–902. Also Schweiz. Wehnschr. Chem. u. Pharm. 1911, v. 49, pp. 617–619.

An editorial (Am. Med. 1911, v. 17, p. 64) states that the dangers of injections of insoluble preparations of mercury in syphilis are occupying considerable attention, particularly in Europe. Cases of poisoning are alarmingly frequent and it is said that many deaths have been due to the "grey-oil" so popular in France.

Riedel's *Berichte* (1911, p. 81) quotes E. Richter, who has used metallic liquid mercury in the form of intravenous injections in the treatment of syphilis, tuberculosis, and carcinoma.

Majumdar, P. C., states that mercurius is a very useful remedy in painful swelling of gums and cheeks.—*Hahnemann. Month.* 1911, v. 46, p. 634.

An editorial (*Eclectic Med. Glean.* 1911, v. 7, pp. 147–152) calls attention to the theory propounded by John King as to the absorption of mercury.

An unsigned note (*J. Am. M. Assoc.* 1911, v. 56, p. 1211) on Eighteenth Century materia medica quotes some of the therapy of Herman Boerhaave with reference to mercury.

Odier discusses the rôle of mercury and of its salts in certain cancers.—*Compt. rend. Acad. sc.* 1911, v. 152, p. 1867. See also *J. Am. M. Assoc.* 1911, v. 57, p. 573.

Schargarodsky, Dvoira, reports experiments to determine the nature of the diuretic action of mercury.—*Ztschr. exper. Path. u. Therap.* 1911, v. 9, pp. 562–570.

Neisser, A., in discussing the therapy of syphilis, reports that mercury and mercurials were found to have a distinct healing action and to destroy the spirochæte.—*Arb. k. Gsndhtsamte*, 1911, v. 37, p. 251.

Bieberbach, Walter D., reports observations on the hypodermic use of mercury in the treatment of syphilis.—*Therap. Gaz.* 1911, v. 35, pp. 615–621.

Müller, Schoeller, and Schrauth report a pharmacological study on the toxic action of organic mercury compounds.—*Biochem. Ztschr.* 1911, v. 33, pp. 381–409.

The Chief Inspector of Factories, according to advanced figures (*Labour Gaz.*, Mar. 1911), reports 10 cases of mercury poisoning and 1 death in 1910, as compared with 9 cases and no deaths in 1909.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 506.

Edginton, Robert William, reports 2 interesting cases of mercurial poisoning in gun-barrel browners.—*Brit. M. J.* 1911, v. 2, p. 337.

The Vienna Correspondent (*J. Am. M. Assoc.* 1911, v. 57, p. 2010) calls attention to a recent demonstration by Teleky of cases of mercurial poisoning, caused by working with mercury vapors in the manufacture of electric lamps.

See also under *Unguenta*.

Additional references on the therapy and pharmacology of mercury will be found in *Ind. Med.*; *J. Am. M. Assoc.*; and *Zentralbl. Biochem. u. Biophysik*.

HYDRARGYRUM AMMONIATUM.

Sutterheim, G. A., discusses the gravimetric and titrimetric estimation of ammoniated mercury.—*Pharm. Weekblad*, 1911, v. 48, pp. 1085–1087.

Elsdon, G. D., presents a communication on white precipitate and the analysis of white precipitate ointment.—Year-Book of Pharmacy, 1911, pp. 445–451. Also Pharm. J. 1911, v. 87, p. 180, and Chem. & Drug. 1911, v. 79, p. 218.

See also under Unguenta.

HYDRARGYRUM CUM CRETÂ.

Dunn, W. R., in a paper on homemade chemicals, states that the preparation of hydrargyrum cum cretâ may be at any time advantageously undertaken.—Brit. & Col. Drug. 1911, v. 60, p. 57.

HYDRASTINA.

Rabe and McMillan discuss the structural relations of narcotine and hydrastine.—Ann. Chem. 1910, v. 377, pp. 223–258.

Hinsdale, A. E., states that muriate of hydrastis will relieve many of the distressing symptoms caused by dilation of the stomach.—Hahnemann. Month. 1911, v. 46, p. 154.

HYDRASTININÆ HYDROCHLORIDUM.

Düsterbehn, F., points out that the Ph. Germ. V now requires that the melting point of hydrastinine hydrochloride be determined after drying the substance for several days over sulphuric acid.—Apoth.-Ztg. 1911, v. 26, p. 202.

Decker, H., discusses the synthesis of hydrastinine and of cotarnine.—Ztschr. ang. Chem. 1911, v. 24, pp. 1890–1892. Also Chem. Ztg. 1911, v. 35, pp. 1076–1077.

Reichard, C., in a contribution to our knowledge of alkaloid reactions, discusses the reactions characteristic of hydrastinine.—Pharm. Zentralh. 1911, v. 52, pp. 1253–1260.

Decker, H. (Ger. Pat. 234,850, May 11, 1910), describes a process for preparing hydrastinine salts.—J. Soc. Chem. Ind. 1911, v. 30, p. 923. See also Newton, P. A. (Eng. Pat. 29,901, Dec. 23, 1910), *ibid.* p. 1185.

HYDRASTIS.

Lloyd, John Uri, states that hydrastis is also known by the common names, golden seal, yellow puccoon, yellow root, and other similar expressive appellations, signifying its color or applying to its nature. The root of this plant was used by the Indians as a cuticle stain and also as a dye for their garments. Being exceedingly bitter, it was also useful in repelling insects. As a drug it was prominently introduced by the American Eclectics, who first prepared its alkaloidal salts for professional use.—Bull. Lloyd Libr. 1911, No. 18, p. 48. See also Drug. Circ. 1911, v. 55, p. 245, and Pharm. J. 1911, v. 86; p. 824.

Gehe & Co. (Handelsbericht, 1911, p. 102) point out that the market conditions for hydrastis are becoming more and more unsatisfactory, and that the price of the drug is sure to advance.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 56-57) state that the high prices for hydrastis are undoubtedly due to natural scarcity and to a speculative manipulation of the market by American firms.

Miller, Adolph W., reports that, despite the high prices of golden seal prevailing at the present time, it is largely sold to manufacturers of proprietary medicines, who, having once included it as an ingredient in some of their medicines, can not afford to substitute any other drug for it.—Proc. N. W. D. A. 1911, p. 98-99.

Lilly, J. K., reports that the rapidly disappearing hydrastis, with the resulting high price, has induced much sophistication. It is necessary to open every parcel of this drug and go over it piece by piece to separate the true golden seal from the twin leaf root and other intentional or unintentional admixtures.—*Ibid.* p. 158.

Rusby, H. H., asserts that with the present very high price of hydrastis, which is likely to be permanent, even a very small percentage of adulteration becomes profitable and repays careful labor. The articles available for such use are not numerous, and should all be investigated for description in connection with the powdered drug.—Pharm. Era, 1911, v. 44, p. 140.

True, R. H., states that golden seal cultivation has become established in a good many places in this country.—Proc. N. W. D. A. 1911, p. 166.

An unsigned article (Hunter, Trade and Trapper) comments on the cultivation of golden seal and states that the plant grows naturally in rich, loose, loamy soil that is well drained but so full of vegetable matter or humus that it retains moisture well.—Drug Topics, 1911, v. 26, p. 374.

An editorial (Bull. Pharm. 1911, v. 25, p. 444) discusses the scarcity of golden seal and the practicability of its cultivation.

Hartwich, C., points out that the Ph. Germ. V reactions included in the description of hydrastis are for berberine, and regrets that a reaction for the more important hydrastine has not been included.—Apoth.-Ztg. 1911, v. 26, p. 85.

Wetterstroem, Theo. D., states that reliable information regarding the ash content of hydrastis is not readily available. He has examined hydrastis containing as much as 11 per cent of ash, but being unable to find a standard was compelled to pass this drug.—Proc. Ohio Pharm. Assoc. 1911, p. 71.

Roderfeld, A., in a review of the Ph. Germ. V, points out that an extract residue of 20 per cent is required.—Apoth.-Ztg. 1911, v. 26, p. 263.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 126-127) discuss the valuation of hydrastis and present a table showing the alkaloid content requirement and the limitations for ash included in several pharmacopœias.

Rosenthaler, L., calls attention to and describes the crystals obtained from hydrastis by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, p. 343.

Dohme and Engelhard express the belief that the amount of golden seal taken for the assay is entirely too large, considering the high percentage of hydrastinine in the drug.—Am. J. Pharm. 1911, v. 83, p. 522.

Noyes, C. R., points out that hydrastis sometimes contains twice the minimum per cent of hydrastine.—Proc. Minnesota Pharm. Assoc. 1911, p. 76.

Schneider, Albert, reports on 2 samples of hydrastis, 1 of which was adulterated with rootlets, dirt, and foreign tissue.—Pacific Pharm. 1911, v. 5, p. 179.

Sayre, L. E., reports on 4 samples of powdered hydrastis; 2 were found to be below official strength.—Bull. Kansas Bd. Health, 1911, v. 7, pp. 6 ff.

Amos, W. S., reports 2 samples of hydrastis containing less than the required amount of hydrastine, but ordinarily the drug is up to standard.—Proc. Missouri Pharm. Assoc. 1911, p. 98.

Table showing reported variations in alkaloidal content.

Reporter.	Number of samples.	Minimum.	Maximum.	References.
		<i>Per cent.</i>	<i>Per cent.</i>	
Noyes, C. R.....	5	2.7	3.64	Proc. Minnesota Pharm. Assoc. 1911, p. 75.
Ferguson, Geo. A.....	12	2.51	3.21	Proc. New York Pharm. Assoc. 1911, p. 152.
Vanderkleed Chas. E.....	11	2.884	4.850	Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.
Smith, Kline & French Co....	3	2.65	3.4	Analytical Report, 1911, p. 25.
Evans Sons Leacher & Webb..	10	2.77	3.46	Analytical Notes, 1911, 1912, p. 34.
Caesar & Lorets.....		2.60	4.44	Jahres-Bericht, 1911, pp. 56-57.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 632) states that fluid extract of hydrastis is required to contain 2.2 per cent of hydrastine. On evaporation and drying at 100°, the residue should weigh 20 per cent of the amount employed. See also Am. Druggist, 1911, v. 58, p. 138.

The Pharmaceutical Journal (1911, v. 87, p. 878) notes that while the Committee of Reference in Pharmacy recommends that the liquid extract of hydrastis be assayed, nothing is said as to what its alkaloidal strength should be.

Glücksmann, C., presents a new identification reaction with hydrochloric acid followed by chlorinated lime, for fluid extract of hydrastis.—Pharm. Prax. 1911, v. 10, p. 492.

An unsigned article (Pharm. Ztg. 55, 1011) presents some observations on the hydrastine content of commercial fluid extract of hydrastis. The hydrastine content of 5 specimens varied from 0.2026 to 0.2889.—Chem. Abstr. 1911, v. 5, p. 1497.

van der Haar, A. W., discusses the determination of the true hydrastine content in fluid extract of hydrastis.—Pharm. Weekblad 1911, v. 48, pp. 329-333. See also *Ibid.* pp. 1126-1131, and pp. 1302-1307.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 76-80) review some of the recently published papers on the assay of fluid extract of hydrastis.

Bachman, Gustav, reports that the sample of fluid extract of hydrastis analyzed by him contained 2.02 gm. of hydrastine.—Proc. Minnesota Pharm. Assoc. 1911, p. 102.

Smith, Kline & French Co. (Analytical Report, 1911, p. 24) reports that 1 sample of fluid extract of hydrastis was assayed, containing 2.35 gm. of hydrastine in 100 cc.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 41) report that a batch of liquid extract of hydrastis manufactured on the large scale yielded 1.78 per cent of hydrastine.

Heeve, William L., states that, in chronic diarrhoea, hydrastis, as a mucous tonic, is always serviceable, but of little use in atrophic catarrhal conditions.—Nat. Elect. M. Assoc. Quart. 1910-11, v. 2, p. 121.

Felter considers that hydrastis is entitled to the highest rank as a mucous membrane remedy. He remarks that hydrastis, like the "mills of the gods," works slowly, but surely.—Eclectic M. J. 1911, v. 71, p. 464.

Palmer, Chauncey D., states that *Hydrastis canadensis* is a remedy of unusual efficacy for certain dyspeptic morbidities—loss of appetite, epigastric uneasiness, some nausea at times, and labored, heavy digestive processes, associated with, and dependent upon, defective gastric and intestinal secretions.—Eclectic Med. Glean. 1911, v. 7, p. 587.

HYOSCINE HYDROBROMIDUM.

Giuseppi, P. L., discusses hyoscine-morphine anæsthesia in obstetric medicine, and points out that the object of hyoscine-morphine anæsthesia is, not to produce complete unconsciousness, but to produce twilight sleep, from which the patient can be roused at any moment.—Practitioner, 1911, v. 87, pp. 84-95.

Ransom and Scott feel justified in saying that neither morphine nor hyoscine should be used in the treatment of delirium tremens, but of the two hyoscine is undoubtedly the worse.—Am J. M. Sc. 1911, v. 141, pp. 673-687

Jennings, W. Oscar, condemns the routine administration of bromide and hyoscine in the treatment of drug addiction.—Brit. M. J. 1911, v. 2, p. 812.

See also under *Scopolaminæ hydrobromidum*.

HYOSCYAMUS.

Lloyd, John Uri, states that hyoscyamus has been employed in domestic medicine throughout Europe from the remotest times. As a medicinal plant, it was known to Dioscorides, and its qualities were well known to the Arabians. It was reintroduced into medicine by Störck about the middle of the 18th Century.—Bull. Lloyd Libr. 1911, No. 18, pp. 48–49. Also Western Druggist, 1911, v. 33, p. 177.

Turner, W. Spencer, contributes a brief note on the cultivation of henbane.—Pharm. J. 1911, v. 86, p. 390.

Mitlacher, Wilhelm, reports his experiments in the cultivation of *Hyoscyamus niger*.—Pharm. Post, 1911, v. 44, p. 214.

Rusby, H. H., criticises the definition of henbane. He knows of no evidence which would support the implication that the large root leaves or the product of the annual plant are therapeutically inferior. Nor does he know of any reliable information as to the relative proportion of hyoscine and hyoscyamine in these different forms of the drug.—Pharm. Era, 1911, v. 44, p. 140.

Danckwortt, P. W., reports that experiments show that the leaves of hyoscyamus contain less alkaloid than the herb. The herb also contains more extractive than does the leaf.—Arch. Pharm. 1911, v. 249, p. 252.

An unsigned review of the Ph. Germ. V. (Pharm. J. 1911, v. 86, p. 653) points out that an ash limit of 24 per cent is introduced for the powder.

Miller, Adolph W., reports that considerably higher prices are predicted for hyoscyamus, on account of the intense heat which prevailed in Europe during the past summer.—Proc. N. W. D. A. 1911, pp. 91–92.

Wiley, H. W., reports henbane adulterated with *Hyoscyamus muticus*.—Ann. Rep. U. S. Dept. Agric. 1911, 1912, p. 424.

Schneider, Albert, reports on a sample of henbane which was adulterated with an excess of sand.—Pacific Pharm. 1911, v. 5, p. 177.

Notice of Judgment, No. 754, under the food and drugs act, deals with the adulteration and misbranding of hyoscyamus.

Howard, Charles D., reports that 3 lots of powdered henbane examined, varied from 17.02 to 30.35 per cent of ash. In 2 of the samples the mineral content was thought to be excessive.—New Hampshire San. Bull. 1911, v. 3, No. 13, p. 257.

Hartwich, C., thinks that the requirement of the Ph. Germ. V, that hyoscyamus contain 0.07 per cent of alkaloid, is a very moderate

one, particularly in view of the fact that other pharmacopœias require up to 0.1 per cent (Ph. Helv. IV).—Apoth.-Ztg. 1911, v. 26, p. 14. See also Pharm. J. 1911, v. 86, p. 206.

Table showing reported variations in alkaloidal content of hyoscyamus.

Reporter.	Number of samples.	Minimum.	Maximum.	References.
		<i>Per cent.</i>	<i>Per cent.</i>	
Smith, Kline & French Co...	12	0.04	0.076	Analytical Report, 1911, p. 26.
Ferguson, George A.....	2	.075	.091	Proc. New York Pharm. Assoc. 1911, p. 153.
Vanderkleed, Chas. E.....	12	.0677	.2450	Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.
Pearson, W. A.....	7	.026	.07	<i>Ibid.</i> p. 124.

An unsigned article (Bull. Imp. Inst. 1911, v. 9, pp. 116) reports that a sample of leaves of Indian *Hyoscyamus niger* was found to contain 0.062 per cent of total alkaloids.

Roderfeld, A., in a review of the Ph. Germ. V points out that the extract of hyoscyamus is required to yield 0.5 per cent of hyoscyamine.—Apoth.-Ztg. 1911, v. 26, p. 263.

See also Chem. & Drug. 1911, v. 78, p. 632, and Am. Druggist, 1911, v. 58, p. 138.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 2) recommends that the green extract of hyoscyamus be retained under its present name. Its standardization is considered to be unnecessary owing to the small proportion of alkaloid which it contains. See also Pharm. J. 1911, v. 87, p. 525.

Cornish, William, says that he found that hyoscyamus extract contains a greater percentage of alkaloid if made from a mixture of annual and biennial leaves.—Chem. & Drug. 1911, v. 79, p. 164.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 41) report that a sample from the bulked green extract of hyoscyamus, prepared from some tons of herb, yielded 0.082 per cent of total alkaloids by titration, a result nearly identical with that obtained last year but low in comparison with the average of a number of years.

Danckwortt, P. W., reports that a sample of extract made from the dried leaves contained 0.355 per cent of alkaloids and 15.80 per cent of ash.—Arch. Pharm. 1911, v. 249, p. 253.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 4) recommends that tincture of hyoscyamus be made with 70 per cent alcohol in accordance with the International Agreement; but, contrary to the latter, the tincture should be made from the leaves and flowering tops, and not from the leaves alone.—See also Pharm. J. 1911, v. 87, p. 847.

The A. Ph. A. Committee on Drug Market is reported as finding 10 samples of tincture of hyoscyamus to give from 1.04 to 4.27 per cent of extractive and to contain from 23.9 to 40.3 per cent of alcohol.—*Drug Topics*, 1911, v. 26, p. 275.

Sayre, L. E., reports on 3 samples of tincture of hyoscyamus; 2 were found to be below standard.—*Bull. Kansas Bd. Health*, 1911, v. 7, pp. 8 ff.

Berner, Agnes, in a report of studies to determine the narcotic properties of solanacea, concludes that extract of hyoscyamus materially increases the narcotic action of morphine and of urethane.—*Ztschr. exper. Path. u. Therap.* 1911, v. 9, pp. 571–580.

Woodbury, Benj. C., Jr., reports that hyoscyamus (3x) has repeatedly magically relieved the short, dry, hacking cough from bronchitis or elongated uvula. Also coughs worse on first lying down at night.—*Hahnemann. Month.* 1911, v. 46, p. 474.

Crance, A. J., states that hyoscyamus is employed by all schools of drug therapy, with a degree of unity as to results, and for similar ideas of pathological states, not usually accorded many others.—*Nat. Eclect. M. Assoc. Quart.* 1910–1911, v. 2, pp. 91–92.

Knott, John, presents a brief medico-historical study of Shakespeare's "cursed hebenon."—*Am. Druggist*, 1911, v. 58, p. 275.

INFUSA.

Roderfeld, A., in a review of the Ph. Germ. V points out that infusions are directed to be freshly prepared.—*Apoth.-Ztg.* 1911, v. 26, p. 272.

See also *Pharm. J.* 1911, v. 86, p. 708, and *Chem. & Drug.* 1911, v. 78, p. 631.

Currie, Archbald, presents a brief note on aseptic infusions.—*Pharm. J.* 1911, v. 86, p. 106. Also *Brit. & Col. Drug.* 1911, v. 59, p. 74.

Stephenson, Thomas, discusses the comparative appearance and value of fresh infusions and of concentrated infusions.—*Pharm. J.* 1911, v. 86, p. 255. Also *Brit. & Col. Drug.* 1911, v. 59, p. 153.

For a further discussion on concentrated infusions, see *Chem. & Drug.* 1911, v. 78, p. 282. See also *Xrayser II*, p. 317; *Thos. Stephenson*, p. 383; and *Henry B. Morgan*, p. 454.

Whorton, C., states that he has known of the fluid extract dilution being carried even to the extent of infusion making, which should be accounted as criminal.—*Alabama Pharm. Assoc.* 1911, p. 97.

As an illustration of the continued existence of abuses in pharmacy, the following abstract from the *Pharmaceutical Journal and Pharmacist* from 1841, reprinted in the same journal for May, 1911, p. 584, will be of interest:

Some druggists are in the habit of keeping tinctures for the various sions, which they reduce with water to the proper strength.

This form of preparation is obviously objectionable, inasmuch as the constituents of a tincture differ essentially from those of an infusion. Indeed, if this substitution were admissible, infusions might be discarded altogether. Whenever the fresh infusion can be procured, it ought undoubtedly to be used; but the "liquors" above mentioned, or a concentrated infusion, with a small portion of tincture to insure its keeping, may be considered the best substitute.

IODOFORMUM.

Düsterbehn, F., notes that the Ph. Germ. V requires that iodoform be insoluble in water and soluble in 70 parts of alcohol at 15°.—Apoth.-Ztg. 1911, v. 26, p. 202.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 581) points out that a limit of 1 per cent for moisture is introduced.

Anon., The Ph. Germ. V requires that iodoform have a melting point of about 120°, and that it should leave on ignition a residue of not more than 0.1 per cent.—Chem. & Drug. 1911, v. 78, p. 14.

Plotnikow, Joh., in a photo-chemical study, discusses the oxidation of iodoform by means of oxygen.—Ztschr. physik. Chem. 1911, v. 75, pp. 337-356. See also pp. 385-404, and *Ibid.* v. 76, pp. 743-752.

Bardach, Bruno, discusses the dimorphism of iodoform.—Chem. Ztg. 1911, v. 35, pp. 11-12. See also Ztschr. anal. Chem. 1911, v. 50, pp. 545-548.

An unsigned abstract (Bull. Phar.) states that in order to remove iodoform odor from the hands they should be wet with water and then a small quantity of potassium carbonate and 2 or 3 drops of ammonia water applied.—Pract. Drug. 1911, v. 29, Jan. p. 45.

Fischer (Presse méd.) quotes Zupitza to the effect that iodoform constitutes a remarkable means of prophylaxis against the plague flea; a small amount, too slight to be appreciable to the nose, is very effective.—Pharm. Era, 1911, v. 44, p. 488.

An editorial (N. York M. J. 1911, v. 94, p. 149) quotes the Presse médicale, stating that iodoform affords perfect protection against fleas, even in such infested territories as German West Africa.

Royster, H. A., reports on the use of melted iodoform ointment in the treatment of suppurating bubo and ischiorectal abscess.—Med. Rec. 1911, v. 79, pp. 340-341.

Flick (Mo. Cycl. Med. Bull. Aug. 1910) discusses the use of iodoform dissolved in cod liver oil as a therapeutic measure by skin inunction.—Therap. Gaz. 1911, v. 35, pp. 51-53.

Mowat, Harold, has a good deal of faith in the treatment of basic meningitis by the inunction of iodoform ointment.—Lancet, 1911, v. 180, p. 24.

Bloch, Bruno, reports experimental studies on the nature of iodoform idiosyncrasy.—Ztschr. exper. Path. u. Therap. 1911, v. 9, pp. 509-538.

Maylard, Ernest, presents a note on the treatment of appendical abscess with pure carbolic acid and iodoform with a tabulated statement of the results in 27 cases.—*Brit. M. J.* 1911, v. I, p. 676.

A number of additional references on the pharmacology and therapeutic uses of iodoform will be found in *Index Med.*; *J. Am. M. Assoc.*; and *Zentralbl. Biochem. u. Biophysik.*

IODUM.

Lloyd, Gordon, states that iodine was discovered in 1811 by Courtois.—*Rocky Mountain Druggist*, 1911, v. 25, March, p. 43.

Düsterbehn, F., points out that the *Ph. Germ. V* gives the solubility of iodine in water as approximately 1:4,500; in alcohol, 1:9; and in glycerine, 1:200.—*Apoth.-Ztg.* 1911, v. 26, p. 202.

Telle and Deviot criticize the *Ph. Fr. V* monograph on the assay of iodine.—*Bull. sc. pharmacol.* 1911, v. 18, pp. 483-485.

Smith, Kline & French Co. (Analytical Report, 1911, p. 26) reports that five samples of iodine were examined; strength from 96.8 to 99.25 per cent.

Emde, Hermann, reports some observations on the determination of iodine in pharmaceutical practice.—*Apoth.-Ztg.* 1911, v. 26, pp. 309-310.

Baxter, Gregory Paul, in a study on the revision of the atomic weights of silver and iodine, reports observations on the relationship of silver to iodine.—*Ztschr. anorg. Chem.* 1911, v. 70, pp. 34-48.

Elvove, Elias, presents a note on the use of sulphur dioxide in checking the equivalencies of the volumetric solutions of iodine, alkali, and silver.—*Am. J. Pharm.* 1911, v. 83, pp. 19-23.

Ley and Engelhardt report some observations on the color of iodine solutions.—*Ztschr. anorg. Chem.* 1911, v. 72, pp. 55-62.

Landau, M., reports experimental observations on the distribution of iodine between different organic solvents.—*Ztschr. physik. Chem.* 1910, v. 73, pp. 200-211.

Bernier and Péron outline a method for the estimation of small quantities of iodides, dependent upon their conversion into iodates by potassium permanganate and the estimation of the iodates by potassium iodide.—*Répert. pharm.* 1911, v. 23, p. 207.

Auger, V., discusses the oxidation of iodine by means of hydrogen dioxide.—*Apoth.-Ztg.* 1911, v. 26, pp. 333-334.

Bray and Connolly present a correction on the hydrolysis of iodine and of bromine.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 1485-1487.

Parsons and Whittemore report observations on the equilibrium in the system, potassium iodide, iodine and water.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 1933-1936.

Hildebrand, Joel H., discusses a paper by Waentig [*Hyg. Lab. Bull.* 79, p. 426] commenting on a paper by Hildebrand and Glascock.—*Ztschr. Physik. Chem.* 1910, v. 74, pp. 679-682.

The Committee of Reference in Pharmacy (Third Report, Suppl., p. 4) notes that as *tinctura iodi* is rarely administered internally and as the *liquor iodi fortis* of the Ph. Brit. is approximately equivalent to the *tinctura iodi* of the International Agreement, viz., 11.5 per cent of iodine as against 10 per cent, it sees no sufficient reason for altering its present strength. See also *Pharm. J.* 1911, v. 87, p. 847.

Roderfeld, A., points out that the Ph. Germ. V now directs that tincture of iodine be made by dissolving 1 part of iodine in 9 parts of alcohol and requires that the iodine content be from 9.4 to 10 per cent, thus recognizing the possible deterioration of the preparation.—*Apoth.-Ztg.* 1911, v. 26, p. 291.

Desvignes criticizes the French Codex method for assay of tincture of iodine, and asserts that there should be a process for the estimation both of total and free iodine and some official relations between these two numbers.—*J. Pharm. et Chim.* 1911, v. 3, p. 186.

Cook, Alfred N., cautions druggists against omitting the potassium iodide in making tincture of iodine.—*Bull. South Dakota Food & Drug. Dept.* 1911, No. 23, p. 2.

Holbrook, D. M., protests against the addition, without any apparent justification, of potassium iodide to the official tincture of iodine, and suggests that the old tincture be restored and, if necessary, the present one retained as compound tincture of iodine.—*N. York M. J.* 1911, v. 93, p. 446.

Herron, Charles S., makes tincture of iodine by introducing a small pledget of cotton in the neck of a suitable funnel, then the resublimed iodine and the potassium iodide in a very fine powder, passing sufficient alcohol through the funnel to make the desired quantity.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 314.

Utech, P. Henry, recommends the circulatory displacement method in preparing tincture of iodine.—*Drug Topics*, 1911, v. 26, p. 279. Also *Bull. Pharm.* 1911, v. 25, p. 370.

Shannon, F. L., reports an experiment to determine the keeping qualities of tincture of iodine U. S. P. Sample made July 6, 1910, assayed 7 per cent; 11 months later it was found actually to have increased 7 per cent in strength.—*Proc. Michigan Pharm. Assoc.* 1911, p. 110.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that tincture of iodine is frequently met with which is not of the desired content; most of the time it is because it is poorly prepared and the iodine is not dissolved.—*Bull. Soc. pharm. Brux.* 1911, v. 55, p. 240. Also *J. Pharm. Anvers*, 1911, v. 67, p. 564.

Williams, Ed. E., suggests an improvement in the official process for tincture of iodine.—*Pract. Drug.* 1911, v. 29, April, p. 36.

Cook, Alfred N., states that some of the tincture of iodine examined was very carelessly made.—*Bull. South Dakota Food and Drug Dept.* 1911, No. 23, p. 1.

Brown, Linwood A., reports samples of tincture of iodine deficient in iodine, and with potassium iodide sometimes entirely absent.—*Proc. Kentucky Pharm. Assoc.* 1911, p. 99.

Drew thinks that, when a tincture of iodine made according to the *Pharmacopœia* formula of to-day does not show more iodine than some of those reported to the Minnesota State Pharmaceutical Association it shows extreme carelessness.—*Northwestern Druggist*, v. 12, Mar. 1911, p. 25.

Table showing some of the analytical results reported for tincture of iodine.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Army, H. V.....	15	6	<i>Proc. Ohio Pharm. Assoc.</i> 1911, p. 126.
Brown, Lucius P.....	132	106	<i>Rep. Tennessee Bd. Health</i> , 1911, p. 129.
Brown, L. A.....	17	16	<i>Bull. Kentucky Agric. Exper. Sta.</i> 1911, Oct. pp. 25-33.
Dunlap, Renick W.....	27	21	<i>Rep. Ohio Dairy & Food Com.</i> 1910, 1911, p. 63.
Halverson, J. O.....	8	8	<i>Ann. Rep. Food & Drug Com. Missouri</i> , 1911, p. 14.
Do.....	4	4	<i>Bull. Dept. Food & Drug Inspec. Missouri</i> , 1911, Nos. 10, 11, and 12, and Nos. 1, 2, and 3.
Howard, Charles D.....	16	8	<i>New Hampshire San. Bull.</i> 1911, v. 3, no. 14, p. 282.
Ladd, E. F.....	128	51	<i>Bull. Agric. Exper. Sta. North Dakota</i> , 1911, v. 1, No. 37, pp. 423-424.
Lythgoe, Hermann C.....	114	8	<i>Rep. Massachusetts Bd. Health</i> , 1911, p. 443.
Massachusetts Bd. Health.....	1	1	<i>Monthly Bulletin</i> , 1911, p. 173.
Porter, C. S.....	32	22	<i>Am. Druggist</i> , 1911, v. 59, p. 42.
Rose, R. E.....	55	24	<i>Bull. Florida Agric. Dept.</i> 1911, v. 21, pp. 130-135.
Wilson, R. C.....	170	161	<i>Proc. Georgia Pharm. Assoc.</i> 1911, p. 12.

Street, John Phillips, reports examining 20 samples of tincture of iodine, all but 2 from druggists whose iodine tincture had in a previous year been found below standard. The samples contained from 6.29 to 7.63 grammes of iodine per 100 cc., no sample showing less than 90 per cent of U. S. P. strength. From the results, the usefulness of drug inspection in this State is apparent.—*Rep. Connecticut Agric. Exper. Sta.* 1911, pp. 180-181.

Diekman, George C., reports the opinion that the use of glycerin in iodine ointment is not necessary and it should be omitted.—*Proc. New York Pharm. Assoc.* 1911, p. 82.

Coblentz, Virgil, reports that of 14 prescriptions for iodine ointment filled in various pharmacies in New York City, 5 were passed as being within reasonable limits. The shortage in iodine varied from 20 to 92 per cent, while that of potassium iodide varied from 14 to 79 per cent. Several specimens were colored brown to cover their deficiency in iodine.—*J. Ind. & Eng. Chem.* 1911, v. 3, p. 540.

Bachman, Gustav, reports that 2 samples of compound solution iodine contained, respectively, 3.98 and 4.07 per cent of iodine.—*Proc. Minnesota Pharm. Assoc.* 1911, p. 101.

Burnett, J. A., outlines a method for making soluble iodine by dissolving 8 per cent of iodine in diluted alcohol, distilling, and adding a small amount of glycerin. *Phys. Drug. News*, 1911, v. 6, p. 290.

Desachy presents a note on the preparation of iodotannic sirup. *Bull. sc. pharmacol.* 1911, v. 18, p. 99. See also p. 649.

Veloso, T. (*Farm. moderna*, Jan. 1911, pp. 246-247), suggests a modification of the formula for the iodotannic sirup of Guilliermond.—*Bull. sc. pharmacol.* 1911, v. 18, p. 191.

Gayet, L., presents a note on the causes determining the formation of a deposit at the bottom of the flask containing iodotannic sirup, and the "mellification" of this sirup. He suggests a modification of the *Codex monograph*.—*Bull. sc. pharmacol.* 1911, v. 18, pp. 402-406.

Guidi, J. (*Farm. moderna*, Sept. 1910), outlines a method for the estimation of iodine in iodotannic preparations.—*Ann. falsif.* 1911, v. 4, p. 222.

Marchand, Charles (*Bull. comm.* Apr. 1911), suggests a formula and method for the preparation of iodotannic sirup.—*Répert. pharm.* 1911, v. 23, p. 246.

Becquet, Marcel, discusses the nature of the iodotannic combination.—*Bull. sc. pharmacol.* 1911, v. 18, pp. 645-649.

Davies, John J., states that the equivalent of the so-called colorless tincture of iodine can readily be made in two or three minutes by making a 10 per cent solution of the iodide of ammonium or of sodium in diluted alcohol.—*Drug. Circ.* 1911, v. 55, p. 568.

Mendenhall, A. M., protests that so-called colorless tincture of iodine is really a mixture of sodium iodide and sodium tetrathionate; since it no longer contains free iodine it should not be called tincture of iodine.—*J. Am. M. Assoc.* 1911, v. 56, p. 1389.

Lafay presents an important study on the comparative absorption of iodides and iodized oils.—*J. Pharm. et Chim.* 1911, v. 4, p. 42.

Gilbride, John J., asserts that iodine in solutions of different strength is now used for skin disinfection in many large clinics, and has largely supplanted the washing and scrubbing with solutions of mercury, etc.—*N. York M. J.* 1911, v. 93, p. 781. See also editorial, p. 835.

McDonald, Ellice, discusses the sterilization of the skin by the use of a 2 per cent solution of iodine in carbon tetrachloride.—*Med. Rec.* 1911, v. 79, pp. 675-676.

Leedham-Green, Charles, contributes an inquiry into the value of sterilization of the skin by iodine.—*Brit. M. J.* 1911, v. 2, pp. 1078-1081. See also pp. 1330, 1383, 1447.

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Cannaday, J. E., points out that the iodine method of skin sterilization was used in this country as early as 1905.—*Therap. Gaz.* 1911, v. 35, p. 759.

Favrel, G., prefers the method of Lebeau to that of Desvignes for the estimation of iodine in alcoholic solutions.—*Ann. chim. analyt.* 1911, v. 16, p. 12.

Riedel's *Berichte* (1911, pp. 84–86) reviews some of the recent literature relating to the use of iodine, more particularly the use of alcoholic solution of iodine for skin disinfection.

An editorial (*Am. Vet. Rev.* 1911, v. 39, p. 368) notes that the efficacy of the iodine treatment has almost never been found at fault with actinomycosis of soft tissues, while in the treatment of the bony lesions the results have varied very much and the surgeon is often obliged to interfere so as to assist the medicamentous action of the iodide. Attention is called to serious by-effects reported by Leduc.

Talbot, Eugene S., after 20 years' experience, recommends iodine for interstitial gingivitis.—*Dental Digest*, 1911, v. 17, p. 120. See also p. 285.

Fisher, Edgar A., states that the indications for iodine in the treatment of pneumonia are anxiety and oppression of the chest, burning, tearing, or stabbing pains in the chest, cough dry, dyspepsia, blood-streaked expectoration, hoarse voice.—*J. Therap. & Diet.* 1911, v. 5, p. 201.

A number of additional references on the chemistry, pharmacology, and therapeutic uses of iodine will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Zentralbl. Biochem. u. Biophysik.*; and *Chem. Centralbl.*

IPECACUANHA.

Lloyd, John Uri, states that the beginning of the history of ipecacuanha root is clouded in mystery and fable. The South American Indians are supposed to have been acquainted with the medicinal properties of the plant, having gained their experience from observing the habits of animals. It was introduced into Europe by Piso and Marcgraf about 1648.—*Bull. Lloyd Libr.* 1911, No. 18, pp. 49–51. See also *Montreal Pharm. J.* 1911, v. 22, pp. 80–81.

Hartwich, C., points out that the size of the starch grains is not sufficient to differentiate between Rio and Carthagena ipecac and that a more satisfactory differentiation is to be found in the cells of the woody portion of the root. He also discusses the noncompliance of the Ph. Germ. V with the Brussels Protocol so far as powder of ipecac is concerned.—*Apoth.-Ztg.* 1911, v. 26, pp. 57–58.

See also *Pharm. J.* 1911, v. 86, p. 295.

Cline, R. R. D., reports a study of ipecac, with a review of its literature. He has met with samples of ipecac varying from 0.058 to 2 per cent of total alkaloids, and suggests that the U. S. P. require

a second operation whereby cephaeline can be separated from emetine.—*Proc. Texas Pharm. Assoc.* 1911, p. 93–102.

Rusby, H. H., points out that ipecac is a good illustration of the class of drugs that can be readily adulterated, by digging the root when it is muddy and drying it still covered with earth. This form of adulteration can not be objected to, as the alkaloidal standard is so low that a fair drug will meet the requirements even when covered with dirt.—*Proc. New York Pharm. Assoc.* 1911, p. 154.

Hartwich, C., describes, with illustrations, an ipecac root from Sao Paulo in Brazil.—*Schweiz. Wehnschr. Chem. u. Pharm.* 1911, v. 49, pp. 593–595.

An editorial note (*Brit. & Col. Drug.* 1911, v. 60, p. 386) discusses the market for ipecac, and the cultivation of ipecac in India.

Gehe & Co. (*Handelsbericht*, 1911, pp. 100–101) present tables showing the London statistics of the several kinds of ipecac, and point out that the Rio variety has been unusually scarce for upward of a year. They also comment on the Ph. Germ. V requirements for ipecac, and note that the powdered drug is to be prepared from the root and not from the bark alone, as required by the Brussels Conference Protocol.

Caesar & Loretz (*Jahres-Bericht*, 1911, pp. 53–54) state that during the past year Carthagera ipecac has occasionally been held at higher figures than the official Rio variety.

Planchon and Juillet present a note on the adulteration of powdered ipecac.—*Bull. pharm. Sud-Est*, 1911, v. 16, pp. 189–192. Also *Répert. pharm.* 1911, v. 23, p. 248.

Keller, Oskar, reports a study of the alkaloids of ipecac and the general behavior of emetine and of cephaeline.—*Arch. Pharm.* 1911, v. 249, pp. 512–524.

The Council on Pharmacy and Chemistry of the A. M. A. reports that cephaeline and emetine hydrochloride were omitted from N. N. R. because they do not appear to be in sufficiently extensive use to justify their retention.—*Rep. Council Pharm. & Chem.* 1911, pp. 62–63.

Schneider, Albert, reports on 3 samples of ipecac, 2 of which were adulterated with milkweed and spurge.—*Pacific Pharm.* 1911, v. 5, p. 177. See also p. 179.

The Biennial Report of the Inspection of Pharmacies, 1909–10, states that ipecac powder is not always of the required fineness, and sometimes contains a notable proportion of wood. Certain of the samples analyzed did not have the desired alkaloid content.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 230. Also *J. Pharm. Anvers*, 1911, v. 67, p. 518.

Caesar & Loretz (*Jahres-Bericht*, 1911, pp. 123–125) discuss the valuation of ipecac and present a table showing the alkaloid content

requirement and the limitations for ash included in several pharmacopœias.

Dohme and Engelhardt think that the amount of drug prescribed for the assay process should be reduced considerably. A more satisfactory indicator might be secured.—*Am. J. Pharm.* 1911, v. 83, p. 522.

Table showing reported variations in alkaloidal content of ipecac.

Reporter.	Number of samples.	Per cent.		References.
		Minimum.	Maximum.	
Ferguson, George A.....	10	1.73	2.23	<i>Proc. New York Pharm. Assoc.</i> 1911 p. 152.
Smith, Kline & French Co...	4	1.75	2.3	<i>Analytical Report</i> , 1911, p. 26.
Vanderkleed, Chas. E.....	14	2.034	2.500	<i>Proc. Pennsylvania Pharm. Assoc.</i> 1911, p. 132.
Evans Sons Lescher & Webb.	16	1.43	2.4	<i>Analytical Notes</i> , 1911, 1912, p. 38.
Southall Bros. & Barclay.....	20	1.62	2.38	<i>Rep.</i> 1911, Birmingham, 1912, p. 13.

Cowley, R. C., states that representatives of wholesale firms have been heard to assert that their customers are averse to paying a price for a properly made fluid extract of ipecac, and that this is the cause for so much of the inferior article on the market.—*Chem. & Drug. Australas.* 1911, v. 26, p. 199.

Coblentz, Virgil, reports that samples of fluid extract of ipecac, dispensed in various pharmacies in New York City, varied from 24 to 43 per cent below the standard in alkaloidal content. One sample dispensed was not ipecac.—*J. Ind. & Eng. Chem.* 1911, v. 3, p. 540. See also *Pract. Drug.* v. 29, Apr., 1911, p. 29.

Bachman, Gustav, reports that the sample of fluid extract of ipecac analyzed by him contained 1.228 gm. of the alkaloids from ipecac.—*Proc. Minnesota Pharm. Assoc.* 1911, p. 102.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that tincture of ipecac was found too poor in alkaloids; it does not suffice to make a tincture with 2 per cent powder to obtain a 0.20 per cent tincture.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 240. Also *J. Pharm. Anvers*, 1911, v. 67, p. 564.

Coblentz, Virgil, reports that samples of tincture of ipecac, dispensed in various pharmacies in New York City, were found to be from 16 to 42 per cent short in alkaloidal content.—*J. Ind. & Eng. Chem.* 1911, v. 3, p. 540.

Duncan, C. A., comments on the formula proposed by Beringer and Beringer for making sirup of ipecac directly from the drug, and suggests macerating for at least 24 hours before proceeding with the percolation so as to insure complete exhaustion of the drug.—*Proc. Texas Pharm. Assoc.* 1911, p. 104-105.

Diekman, George C., reports that sirup of ipecac can be very readily prepared direct from the powdered drug by percolating the ipecac with a mixture of acetic acid, glycerin, and water, and dissolving the sugar in the resultant percolate.—*Proc. New York Pharm. Assoc.* 1911, p. 88.

Beringer, George M., points out that the Ph. Germ. V directs that when wine of ipecac is prescribed the tincture of ipecac is to be dispensed therefor.—*Proc. New Jersey Pharm. Assoc.* 1911, p. 78.

An unsigned note (*J. Am. M. Assoc.* 1911, v. 56, p. 1211) on Eighteenth Century materia medica quotes some of the therapy of Herman Boerhaave with reference to ipecac.

Buck, Albert H., reports some reminiscences on the use of ipecac in the treatment of "Panama fever" in 1867.—*Med. Rec.* 1911, v. 80, pp. 1136-1137.

Frazier, Wm. Lawrence, reports 6 cases in which ipecac was used to abort typhoid fever.—*Ibid.* pp. 923-924.

Roberts, Dudley, reports some observations on the influence of ipecac upon intestinal amœbiasis.—*N. York M. J.* 1911, v. 94, pp. 1231-1233.

An editorial (*Am. Med.* 1911, v. 17, pp. 400-401) states that the therapeutic value of ipecac seems to be much greater than physicians in temperate climates have imagined. The drug has been found to be a specific in the early stages of amœbic dysentery, and if given in sufficiently large doses it completely cures every case.

An editorial (*Therap. Gaz.* 1911, v. 35, pp. 29-31) discusses the use of ipecac in amœbic dysentery, and reviews some of the literature on the subject.

Heeve, William L., states that a strong decoction of ipecac is his favorite remedy in dysentery-like evacuations—*Nat. Elect. M. Assoc. Quart.* 1910-11, v. 2, p. 121.

An editorial (*Hahnemann. Month.* 1911, v. 46, p. 78) points out that ipecac is indicated in a constant, shaking, ineffectual cough that causes much nausea and sometimes vomiting.

Kopp, Frederick, states that ipecac should be borne in mind in vomiting at night. Ipecacuanha has an affinity for affections having periodical paroxysms, especially those occurring at night.—*Ibid.* p. 636.

A number of additional references on the pharmacology and therapeutic uses of ipecac will be found in *Index Med.*; *J. Am. M. Assoc.*; and *Zentralbl. Biochem. u. Biophysik.*

JALAPA.

Lloyd, John Uri, states that jalap is a gift of Mexico and became a favorite in Europe in the days of heroic medication.—*Bull. Lloyd Libr.* 1911, No. 18, pp. 51-52.

Caesar & Loretz (*Jahres-Bericht*, 1911, p. 68) point out that the available supply of jalap is of unusually good quality and contains from 12 to 15 per cent of resin.

The Committee of Reference in Pharmacy (Third Report, p. 6) states that, in view of the recent improvement in the resin yield of commercial jalap, the drug might well be required to afford not less than 9 nor more than 11 per cent as at present official, in place of 7 to 9 per cent as recommended in the Report, 1910 [See Hyg. Lab. Bull. 84, p. 505]. See also Pharm. J. 1911, v. 87, p. 555.

Hartwich, C., points out that the Ph. Germ. V now requires 10 per cent of resin in jalap. He also calls attention to the fact that other pharmacopœias require from 7 to 11 per cent.—*Apoth.-Ztg.* 1911, v. 26, p. 105.

See also Pharm. J. 1911, v. 86, p. 296.

Stevens, A. B., states that the U. S. P., in 1890, required that jalap should contain 12 per cent of total resins. This requirement was reduced in the Pharmacopœia for 1900 to 8 per cent and in 1905 [1906] it was further reduced to 7 per cent. It is believed that the low grade is due to immature development or to collecting at the wrong season.—*Pacific Pharm.* 1911, v. 5, p. 87.

Caesar & Loretz (*Jahres-Bericht*, 1911, pp. 144-145) discuss the valuation of jalap, and present a table showing the resin content requirements and the limitations for ash included in the several pharmacopœias.

North, Horace, discusses the assay of jalap and points out that the complete extraction of the cell contents of a drug depends on the permeation by the solvent of every cell, and this must be borne in mind in any effort to extract a finely or coarsely pulverized drug.—*Am. J. Pharm.* 1911, v. 83, pp. 515-517.

Dohine and Engelhardt think that a shorter process of assay, depending on the exhaustion of the root with hot alcohol, would give more satisfactory results. They also express the belief that it would be advisable to control the galenical preparations of jalap by simple assay processes.—*Am. J. Pharm.* 1911, v. 83, p. 522.

Umney, John C., contributes a note on the assay of jalap root, urging a more definite statement as to resin content.—*Pharm. J.* 1911, v. 86, p. 698. See also p. 730, and editorial note, p. 648.

An editorial (*Brit. & Col. Drug.* 1911, v. 60, p. 279) discusses briefly the resin percentage of jalap.

An unsigned review of volume 1 of Ernest J. Parry's work on food and drugs (*Brit. & Col. Drug.* 1911, v. 60, p. 472) points out that jalap is a drug which causes so much trouble that the author takes upon himself to advise a lower standard, viz, 7.5 resin.

An unsigned review of the Ph. Germ. V (*Pharm. J.* 1911, v. 86, p. 654) states that an ash limit of 6.5 per cent is introduced for the

Rosenthaler, L., describes and illustrates the nature of the material obtained from jalap by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 529–530.

"D. B." reports that, according to W. Miltacher, the Austrian inspection of pharmacies shows that jalap powder is sometimes mixed with jalap which has been exhausted in the preparation of the extract. This may be recognized by the fact that the proportion of resin slightly soluble in ether does not attain 10 per cent.—Bull. sc. pharmacol. 1911, v. 18, Annexes, p. 10.

Schneider, Albert, reports on 2 samples of jalap, one of which was adulterated with foreign tissue.—Pacific Pharm. 1911, v. 5, p. 179.

Pearson, W. A., reports that considerable difficulty has been found in obtaining lots which contain less than 15 per cent of resin soluble in ether. Proc. Pennsylvania Pharm. Assoc. 1911, p. 124. See also Bull. Am. Pharm. Assoc. 1911, v. 6, p. 345.

Table showing reported variations in resin content of jalap.

Reporter.	Number of samples	Per cent of resin.		References.
		Minimum.	Maximum.	
Amos, W. S.....	1	6.28	.....	Proc. Missouri Pharm. Assoc. 1911, p. 97.
Ferguson, George A.....	2	6.51	10.06	Proc. New York Pharm. Assoc. 1911, p. 152.
Smith, Kline & French Co...	10	6.09	10.5	Analytical Report, 1911, p. 26.
Vanderkleed, Chas. E.....	12	2.90	15.47	Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.
Evans Sons Leecher & Webb.	25	5.0	16.0	Analytical Notes, 1911, 1912, p. 39.
Southall Bros. & Barclay....	(7)	4.48	14.32	Rep. 1911, Birmingham, 1912, p. 13.

Brunker, J. E., reports that, of 6 samples of tincture of jalapa examined, the average extractive was 4.5 gm. in 100 mls; alcohol by volume, 66.9 per cent.—Brit. & Col. Drug. 1911, v. 60, p. 229.

See also under *Resina jalapæ*.

KAOLINUM.

Raubenheimer, Otto, thinks that kaolin should not be dismissed from the Pharmacopœia.—Pharm. Era, 1911, v. 44, p. 12.

Schelenz, Hermann, discusses the identity of argilla and asserts that it is identical with the kaolin of the U. S. P. He also discusses the origin of the words argilla and bolus.—Pharm. Ztg. 1911, v. 56, p. 437.

Bedall, C., discusses the nature and composition of argilla and points out that considerable difference of opinion in regard to the nature of this substance exists, though the Pharmacopœia clearly prescribes bolus alba or aluminum silicate.—Apoth.-Ztg. 1911, v. 26, p. 274. See also pp. 322, 356.

An unsigned article (*Pharm. Ztg.* 1911, v. 56, p. 455) reviews the controversy on the origin of the words *argilla* and *bolus*.

An unsigned article (*Drug. Topics*, 1911, v. 26, pp. 99-100) calls attention to a report by the United States Geological Survey on the production and uses of fuller's earth.

Shepstone, Harold J., describes and illustrates the potter's clay industry of Cornwall.—*Sc. Am. Suppl.* 1911, v. 72, pp. 129-130.

Remington, Bowack, and Davidson report observations on paper makers' clays, and point out that analytical figures, unless interpreted by a skilled chemist, do not represent the value of the clay.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 550-551.

Smith, Kline & French Co. (*Analytical Report*, 1911, p. 27) reports that 14 samples of kaolin were examined and all found to be of satisfactory quality.

Campbell, Andrew, suggests the use of kaolin as an absorbent and filtering medium, for use in both acid and alkaline preparations. It is practically inert chemically, and interferes in no way with the natural reactions in manufacturing processes. It is easily and cheaply obtained of good quality.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 114.

LaWall, Charles H., discusses the detection and estimation of talc in some forms of confections.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 299.

Additional references on the chemistry and therapeutic uses of kaolin will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; and *Chem. Centralbl.*

KRAMERIA.

Lloyd, John Uri, states that the Spanish botanist, Hipolito Ruiz, in 1784 observed the native women of Huanuco and Lima using this drug as a tooth preservative and astringent. He introduced the drug into Spain, and from that country it gradually spread throughout Europe.—*Bull. Lloyd Libr.* 1911, No. 18, p. 52. Also *Rocky Mountain Druggist*, 1911, v. 25, Apr., p. 40.

Glücksman, C., presents a new identification reaction for extract of *krameria*.—*Pharm. Prax.* 1911, v. 10, pp. 489-491. Also *D.-A. Apoth.-Ztg.* 1911-12, v. 32, p. 163.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 59) report that 2 samples of powdered extract of *rhatany* left 1.8 and 3.5 per cent of ash; the first sample being freely soluble in water and slowly in alcohol, and the second the reverse.

Diekman, George C., reports the opinion that the official formula for syrup of *krameria* illustrates the use of fluid extracts to the limit and, despite the comparatively large amount of alcohol present, does not keep well. He presents an improved formula which involves

percolating the drug with a mixture of glycerin and water.—*Proc. New York Pharm. Assoc.* 1911, p. 88.

Rabe, R. P., states that ratanhia is indicated in cases of fissures of anus.—*Hahnemann. Month.* 1911, v. 46, p. 400.

KINO.

Lloyd, John Uri, states that kino, as a drug, has been used by the natives of India from time immemorial and was introduced into commerce by Fothergill in 1757.—*Bull. Lloyd Libr.* 1911, No. 18, p. 52

Simonsen, John Lionel, reports some experimental observations on reactions of gum kino, particularly with potassium hydroxide, methyl ether, and with nitric acid.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 1530–1535.

Bernegau, L. H., asks what is meant by the U. S. P. statement "Soluble in alcohol, nearly insoluble in ether, and slowly soluble in cold water." Three lots examined tested 82.4 per cent, 85.4 per cent, and 76.3 per cent soluble in alcohol, while one was only 74.6 per cent soluble in water.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 124.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 40) report on 2 samples of kino which were found to contain 42 per cent of gallotannic acid, and 2.6, 2.4 of ash, respectively.

Southall Bros. & Barclay (*Rep.* 1911, Birmingham, 1912, p. 14) report that the figures obtained for 3 samples show very wide variation in the quality of commercial kino. The solubility in water ranged from 66.55 to 91 per cent.

Brunker, J. E., reports that, of 10 samples of tincture of kino examined, the average extractive was 23.47 gm. in 100 mls; alcohol by volume, 46.8 per cent; one was defective as to extractive.—*Brit. & Col. Drug.* 1911, v. 60, p. 229.

LACTUCARIUM.

Lloyd, John Uri, states that the fact that lettuce eaten frequently induces drowsiness was known in ancient times, and its reputation in this direction led Redmond Coxe, of Philadelphia, to suggest the collecting of the juice, after the manner employed in the making of opium.—*Bull. Lloyd Libr.* 1911, No. 18, p. 53.

Rusby, H. H., suggests that a suitable reference should be made to the fact that lactucarium may show a degree of mold that is only superficial; at the same time it should be explicitly forbidden that the moldiness extend into the interior of the pieces.—*Pharm. Era*, 1911, v. 44, p. 140.

Kopp, Frederick, states that lactucarium has been a very successful remedy in the treatment of diabetes mellitis, given in from five to ten drops of the tincture, three or four times daily. It has

the power of arresting the abnormal flow of the urine.—Hahnemann. Month. 1911, v. 46, p. 717.

LAPPA.

Lloyd, John Uri, states that burdock has been used in domestic medicine from time out of date.—Bull. Lloyd Libr. 1911, No. 18, pp. 53–54.

Lilly, J. K., reports that the second year woody roots of lappa continue to be mixed with the one year roots.—Proc. N. W. D. A. 1911, p. 158.

LEPTANDRA.

Lloyd, John Uri, states that the various species of leptandra, known under many local names, such as black root, Culver's root, Brinton root, Bowman root, physic root, etc., were used by the early settlers who derived their knowledge of the drug from the American Indian.—Bull. Lloyd Libr. 1911, No. 18, p. 54.

Lilly, J. K., reports that leptandra continues to be a favorite vehicle for soil, gravel, and chicken feathers.—Proc. N. W. D. A. 1911, p. 158.

Royal, George, states that leptandra is indicated in cases of aching in liver, especially in region of gall bladder, extending to spine; tongue heavily coated with dark streaks down the center. Stools black, tarry, bilious, undigested. Urine dark colored. Nausea and vomiting. Gloomy, despondent. Skin hot, dry, and yellow. Weak portal circulation.—Hahnemann. Month. 1911, v. 46, p. 553.

LIMONIS CORTEX.

Lloyd, John Uri, states that the lemon was unknown to the early inhabitants of Greece and Rome, but it was mentioned in the third and fourth centuries A. D., in the Book of Nabathæan Agriculture.—Bull. Lloyd Libr. 1911, No. 18, p. 54.

Hartwich, C., points out that the origin of lemon is now given as *Citrus medica* L.; more correctly it should read *Citrus medica* L. subsp. *Limonum* (Risso) Hooker f.—Apoth.-Ztg. 1911, v. 26, p. 6.

An unsigned article (Tropenpflanzer, 1911, v. 15, pp. 507–509) comments on the cultivation of lemons in Italy, and presents a table showing the export of lemons during the years 1908 to 1910, inclusive.

Table showing some of the analytical results reported for extract of lemon.

Reporters.	Number of samples.		References.
	Examined.	Rejected.	
Dunlap, Renick W.....	38	14	Rep. Ohio Dairy & Food Com. 1910-11, p. 43.
Lythgoe, Hermann C.....	16	4	Rep. Massachusetts Bd. Health, 1911 pp 439, 443.
Street, John Phillips.....	5	3	Rep. Connecticut Agric. Exper. Sta. for 1910-11, p. 581.
Street, John Phillips.....	6	2	<i>Ibid.</i> , for 1911, p. 216.

Notices of Judgment Nos. 733, 738, 739, 768, 774, 806, 807, 823, 895, 918, 939, 966, 1029, 1126, 1147, and 1188, under the food and drugs act, deal with the adulteration and misbranding of extract of lemon.

LINIMENTA.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, pp. 47-48) present a compilation of suggested standards, ranges of specific gravity, and ranges of percentage by volume of alcohol for the official liniments.

Lyonnet and Boulud (Lyon Méd.) note that under certain conditions mixtures of equal parts of tincture of iodine and oil of turpentine, and tincture of iodine and ammonia water are explosive. These liniments are characterized as unnecessary and always dangerous.—Southern Pharm. J. 1910-11, v. 3, p. 221.

LINIMENTUM AMMONIÆ.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 632) states that ammonia liniment is now a mixture of arachis oil 4, and ammonia water 1.

Alcock, F. H., presents a modified formula for ammonia liniment in which he proposes to use a mixture of almond oil and olive oil.—Year-Book of Pharmacy, 1911, pp. 415-417.

LINIMENTUM CAMPHORÆ.

A news note (Brit. Food J. 1911, v. 13, p. 54) reports the conviction of a chemist who sold camphorated oil, supposedly made according to the formula of the Ph. Russ. VI, the contention of the court being that the defendant could not sell in Great Britain pharmaceutical preparations made according to the Russian Pharmacopœia.

Table showing some of the analytical results reported for camphor liniment.

Reporters.	Number of samples.		References.
	Examined.	Rejected.	
Brown, L. A.	8	8	Bull. Kentucky Agric. Exper. Sta. 1911, October, pp. 25-33.
Massachusetts Bd. Health....	12	12	Monthly Bull. 1911, p. 11.
Porter, C. S.	42	27	Am. Druggist, 1911, v. 59, p. 42.
Local Govt. Bd. Scotland.....	26	2	Pharm. J. 1911, v. 86, p. 616.

See also under Camphora.

LINIMENTUM SAPONIS.

Havenhill, L. D., reports that a preliminary examination of soap liniment indicates that there is considerable variation in the specific gravity and camphor content of this preparation. The soap content is fairly uniform.—Proc. Kansas Pharm. Assoc. 1911, p. 110.

Sayre, L. E., states that many pharmacists do not realize the importance of holding to a uniform standard in such a preparation as soap liniment. There are different grades of Castile soap, and the soap liniments made from them also differ very widely.—Bull. Kansas Bd. Health, 1911, v. 7, p. 138.

He also reports that of 42 samples of soap liniment examined 20 were found to be below standard or adulterated.—*Ibid.* p. 140.

LINIMENTUM SAPONIS MOLLIS.

Schnabel presents a number of formulas for making preparations of soap, including spirit of soap and camphorated spirit of soap, directly from olive oil.—Pharm. Zentralh. 1911, v. 52, pp. 134–135.

Hirohashi, S., outlines a method for making spirit of soft soap directly from alkali and oil, using alcohol to facilitate saponification.—J. Pharm. Soc. Japan, 1911, February, p. 55.

LINIMENTUM TEREBINTHINÆ.

Heldmann, P. K., suggests omitting turpentine liniment and adding a linimentum calefaciens, consisting of oleoresin of capsicum, methyl salicylate, liniment of soft soap, and hydrated lanolin.—Proc. New York Pharm. Assoc. 1911, p. 92.

LINIMENTUM TEREBINTHINÆ ACETICUM N. F.

Tartak, Leo, asserts that the use of the yolks of the eggs only and a small part of the white will prevent Stokes' liniment from thickening and hardening.—Bull. Pharm. 1911, v. 25, p. 121.

LINUM.

Lloyd, John Uri, states that flaxseed or linseed has been cultivated from all times in the Old World. The seeds of the plant have been employed both as a food and as a medicine.—Bull. Lloyd Libr. 1911, No. 18, p. 55.

Tunmann, O., states that flax is one of the oldest of our cultivated plants and is now grown in all of the European countries for the production of seed and fiber. The chief sources of import at Hamburg are Russia, Argentina, India, Algeria, Morocco, and Brazil.—Apoth.-Ztg. 1911, v. 26, p. 569.

An editorial (Oil, Paint, and Drug Reporter, 1911, v. 80. Oct. 30, p. 7) calls attention to the report by Bolly on the cultivation of flax in the Northwest.

An unsigned review (Bull. Imp. Inst. 1911, v. 9, pp. 355–380) discusses the cultivation, preparation, and production of flax and linseed. Ireland and Canada are the only parts of the British Empire in which flax fiber is produced on a commercial scale, although it could undoubtedly be grown successfully in some other parts of the Empire.

Hartwich, C., in discussing the Ph. Germ. V description for linseed, states that the color should be given as light brown to reddish brown, and not yellow. He also points out that the mucilage is contained in the membrane.—Apoth.-Ztg. 1911, v. 26, p. 94.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 654) points out that an ash limit of 5 per cent is introduced.

Linke, H., regrets the absence of moisture content and ash content limitations for linseed. He found a sample of this drug to contain 10 per cent of moisture and to yield 5.85 per cent of ash.—Ber. pharm. Gesellsch. 1911, v. 21, p. 195.

Lander, G. D., reports on the formation of hydrocyanic acid from linseed cake. He points out that poisoning by giving linseed has been known and recorded.—Vet. J. 1911, v. 67, pp. 461–464.

Ince, J. W., reports some experiments with flaxseed screenings and the examination of these screenings for weed seeds that might be poisonous and for toxic substances that might be present naturally in the plant. He concludes that flaxseed screenings contain an active poison, prussic acid, in sufficient quantity to cause the death of animals even when the screenings are fed in moderate quantity.—Bull. Agric. Exper. Sta. North Dakota, 1911, v. 1, No. 35, pp. 393–396.

Osborne, Thomas B., discusses the amount and the general character of the proteins found in linseed.—Ergeb. Physiol. 1911, v. 10, pp. 184–188.

Bussard, Léon, discusses the adulteration of linseed.—Ann. falsif. 1911, v. 4, p. 30.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 45) report on 5 samples of crushed linseed, the oil of which extracted with ether varied from 28.2 to 36.6 per cent.

Smith, Kline & French Co. (Analytical Report, 1911, p. 27) reports that 2 samples of linseed were examined. The fixed oil content was 39.5 and 31.05 per cent.

Wilcox, Levi, reports that the total consumption of flaxseed in this country during the season 1910–1911 was approximately 20,000,000 bushels, obtained as follows:

	Bushels.
Produced in the United States.....	9,400,000
Imported from Argentine.....	4,500,000
Imported from British East Indies.....	3,000,000
Imported from Canada.....	3,000,000

—Proc. N. W. D. A. 1911, p. 110.

LIQUORES.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 48) presents a compilation of suggested standards, ranges of specific gravity, and ranges of percentage by volume of alcohol for the official solutions.

LIQUOR ALUMINI ACETATIS N. F.

Düsterbehn, F., points out that the modified Ph. Germ. method for making solution of aluminum acetate avoids the loss of acetic acid by allowing the initial decomposition to take place in the absence of this acid.—*Apoth.-Ztg.* 1911, v. 26, p. 214.

Schenk, D., discusses the making of solution of aluminum acetate according to the new Ph. Germ. V formula.—*Ibid.* pp. 1056-1057.

Whitney, Mrs. D. V., prefers using precipitated calcium carbonate in making solution of aluminum acetate N. F., as it is more likely to be pure.—*Proc. Missouri Pharm. Assoc.* 1911, p. 98.

Riedel's *Berichte* (1911, p. 90) quotes H. Schmidt who has used solution of aluminum acetate in the treatment of acute coryza and acute rhinitis.

LIQUOR ALUMINI ACETICO-TARTRATIS N. F.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 632) states that this preparation is now required to contain about 45 per cent of aluminium aceto-tartrate.

Whitney, Mrs. D. V., suggests that in the formula for solution of aluminum acetico-tartrate the alum be required to be in clear crystals so as to insure the proper amount of water of crystallization.—*Proc. Missouri Pharm. Assoc.* 1911, p. 99.

LIQUOR AMMONII ACETATIS.

The Biennial Report of the Inspection of Pharmacies, 1909-1910, states that solution of ammonium acetate is contaminated by empyreumatic matter.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 236. Also *J. Pharm. Anvers*, 1911, v. 67, p. 524.

Whitney, Mrs. D. V., points out that the concentrated solution of ammonium acetate should not be used in making the U. S. P. solution and she can see no use for this N. F. solution.—*Proc. Missouri Pharm. Assoc.* 1911, p. 99.

LIQUOR AMMONII CITRATIS FORTIOR N. F.

Whitney, Mrs. D. V., points out that this solution is four times the strength of the solution of the Ph. Brit. IV.—*Proc. Missouri Pharm. Assoc.* 1911, p. 99.

LIQUOR ANTISEPTICUS.

Dawson, E. S., suggests that the addition of a small percentage of menthol and methyl salicylate, and also of fluid extract of baptisia tinctoria with a little glycerin, will greatly improve this preparation.—*Proc. New York Pharm. Assoc.* 1911, p. 92.

Frazier, W. J., states that several physicians of his acquaintance favor the coloring of antiseptic solution and he has been in the habit of adding sanguinaria, which gives any shade desired and seems to be permanent.—*Proc. Kansas Pharm. Assoc.* 1911, p. 30.

LIQUOR ANTISEPTICUS ALKALINUS N. F.

Williams, Ed. E., outlines a method for making alkaline antiseptic solution. He suggests adding the solution of the salts very slowly under constant agitation.—*Drug Topics*, 1911, v. 26, p. 115. Also *Pract. Drug*. 1911, v. 29, April, p. 36.

Several proposed modifications of the formula for liquor antisepticus alkalinus are reprinted.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, pp. 131–132.

Whitney, Mrs. D. V., thinks that alkaline antiseptic is a most useful solution and is rapidly finding favor among physicians. The chief difficulty in making lies in the difference in color due to lack of uniformity in the tincture of cudbear.—*Proc. Missouri Pharm. Assoc.* 1911, p. 99.

An editorial (*N. A. R. D. Notes*, 1911, v. 11, p. 1465) presents several formulas for alkaline antiseptic N. F., and expresses the belief that sodium salicylate would be a desirable addition to this preparation.

LIQUOR BISMUTHI N. F.

Whitney, Mrs. D. V., reports that solution of bismuth, made by the first formula in the N. F., is a permanent preparation that does not precipitate on standing, as is likely to occur if the alternate formula is used.—*Proc. Missouri Pharm. Assoc.* 1911, p. 99.

The Committee of Reference in Pharmacy (Third Report, p. 6) suggests a new formula to take the place of the present official formula for liquor bismuthi et ammonii citratis; the strength remains the same, but the bismuth subnitrate is converted into citrate. See also *Pharm. J.* 1911, v. 87, p. 556.

LIQUOR BROMI N. F.

Whitney, Mrs. D. V., considers the method of weighing the bromine inaccurate. She believes the bromine should be poured into a weighed quantity of water and then the weight of the bromine ascertained by reweighing. The potassium bromide will perfect the solution.—*Proc. Missouri Pharm. Assoc.* 1911, p. 99.

LIQUOR CALCIS.

An unsigned review of the *Ph. Germ. V* (*Chem. & Drug*. 1911, v. 78, p. 631) points out that the lime water is required to contain 0.15 to 0.17 per cent of $\text{Ca}(\text{OH})_2$, titrated with normal hydrochloric acid, phenolphthalein as indicator.

The Apothecary (Jan. 1911, v. 23, p. 28) describes and illustrates an apparatus for keeping lime water.

The American Druggist (1911, v. 58, p. 12) quotes from Bulletin No. 150, Kentucky Agric. Exper. Sta. the description and illustration of an apparatus for keeping lime water. See also p. 74.

Stedem, F. W. E., outlines a method of making and storing lime water which he has found yields a clear water of constant saturation. *Bull. Pharm.* 1911, v. 25, p. 79.

Muhlhan, Otto, claims that the present method of agitating the slaked lime with distilled water does not rid the lime completely of chlorides and other soluble impurities present. He thinks it would be better to have a purified calcium hydroxide official in the U. S. P.—*Bull. Pharm.* 1911, v. 25, p. 261.

LaWall, Charles H., reports an inquiry regarding the testing of lime water by retail druggists, and points out that only 1 out of 12 druggists was found actually to apply a real quantitative test. He also reports that of 300 samples of lime water examined by the State Pharmaceutical Examining Board of Pennsylvania several years ago 181 were found to be below the U. S. P. requirements, many of them being less than one-half or one-fourth strength, and several being no better than hydrant water.—*Proc. New Jersey Pharm. Assoc.* 1911, p. 94.

Cook, Alfred N., cautions druggists against filling their lime water bottle with water without recharging with a fresh supply of lime.—*Bull. South Dakota Food & Drug Dept.* 1911, No. 23, p. 2.

Cheatham, T. A., commenting facetiously on the poor quality of lime water sold by druggists in Georgia, says: "This is easily understood. In the first place, lime is exceedingly expensive, and we can not afford to put it into the water. It costs too much."—*Proc. Georgia Pharm. Assoc.* 1911, p. 36.

The Biennial Report of the Inspection of Pharmacies, 1909-10, calls attention to the neglect to leave an excess of calcium hydroxide in the bottle to avoid deterioration of strength by carbonization.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 237, and *J. Pharm. Anvers*, 1911, v. 67, p. 525.

Cook, Alfred N., states that some of the lime water examined was found to be about as strong as tap water.—*Bull. South Dakota Food & Drug Dept.* 1911, No. 23, p. 1.

Table showing some of the analytical results reported for lime water.

Reporters.	Number of samples.		References.
	Examined.	Rejected.	
Brown, Lucius P.	50	38	<i>Rep. Tennessee Bd. Health</i> , 1911, p. 129.
Howard, Charles D.	7	0	<i>New Hampshire San. Bull.</i> 1911, v. 3, No. 14, p. 282.
Porter, C. S.	40	20	<i>Am. Druggist</i> , 1911, v. 59, p. 42.
Street, John Phillips.	4	1	<i>Rep. Connecticut Agric. Exper. Sta.</i> 1911, p. 211. See also <i>Ibid.</i> p. 151.
Brown, L. A.	2	2	<i>Bull. Kentucky Agric. Exper. Sta.</i> 1911, October, pp. 25, 33.

Wilson, R. C., reports 67 samples of lime water varying from 12.14 to 100 per cent U. S. P. strength.—*Proc. Georgia Pharm. Assoc.* 1911, p. 35.

LIQUOR CHLORI COMPOSITUS.

Düsterbehn, F., points out that the Ph. Germ. V now directs that chlorine water be made by the solution of chlorine gas in water. The preparation is to be preserved in well filled bottles.—*Apoth.-Ztg.* 1911, v. 26, p. 136.

Taylor, Robert Llewellyn, reports observations on the action of chlorine on alkalies and of carbon dioxide on bleaching powder.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 1906-1910.

Wood, Horatio C., Jr., in an article on the possibility of intestinal antiseptics, calls attention to the evident limitations of the use of chlorine water as an intestinal antiseptic.—*Therap. Gaz.* 1911, v. 35, pp. 153-156.

LIQUOR COCCINEUS N. F.

Whitney, Mrs. D. V., thinks that cochineal color is far superior to carmine solution for cookery.—*Proc. Missouri Pharm. Assoc.* 1911, p. 100.

LIQUOR CRESOLIS COMPOSITUS.

Roderfeld, A., in a review of the Ph. Germ. V, points out that the directions for making compound solution of cresol have been modified so as to bring the preparation in accord with the Ministerial requirement of October 19, 1907.—*Apoth.-Ztg.* 1911, v. 26, p. 272.

S'Renco, John W., presents a formula for making compound solution of cresol. He recommends a simple solution of soft soap in cresol.—*Meyer Bros. Drug.* 1911, v. 32, p. 198.

Serger, H., discusses the valuation of the liquor cresolis saponatus of the Ph. Germ. V, and outlines a method for the estimation of the fatty acids, cresols, and hydrocarbon compounds.—*Apoth.-Ztg.* 1911, v. 26, p. 369.

Cahn, A., asserts that at the present time lysol is the most popular poison for suicide in Germany. He reports a case of poisoning from aspiration into the respiratory tract accompanied by empyema.—*Therap. Monatsh.* 1911, v. 25, pp. 428-431.

The *Pharmaceutical Journal* (1911, v. 86, p. 350) reports an inquest on the body of a woman, aged 42, who died as a result of taking lysol by mistake for a cough mixture.

An editorial note (*Chem. & Drug. Australas.* 1911, v. 26, p. 299) points out that, during the past 12 months, 56 deaths from lysol poisoning have been reported and that its use for suicide might be reduced if the sale were restricted.

Hamilton, H. C., states that the germicidal value of the combination of soap and cresylic acid depends on the glyceride used in the manufacture of the soap. One may therefore conclude that the soap exerts a distinct influence on the value of this agent.—*J. Ind. & Eng. Chem.* 1911, v. 3, p. 584.

An editorial note (*Chem. & Drug. Australas.* v. 26, p. 34) calls attention to the increased use of lysol as a poison by suicides.

See also *Index Medicus*.

LIQUOR FERRI ALBUMINATI.

Lillig, R., presents a comprehensive review of the history, evolution, and present status of the albuminates of iron.—*Apoth.-Ztg.* 1911, v. 26, pp. 589-590, 597-598, 605-606, 620-622, 638, 648-651, 659-662.

An unsigned review of the *Ph. Germ. V* (*Pharm. J.* 1911, v. 86, p. 654) points out that the percentage of iron is now determined volumetrically, instead of gravimetrically, and is required to be 39 to 40 instead of not less than 37.8.

Beringer, George M., states that the *Ph. Germ. V* requires the albumen of fresh laid eggs of the hen in the making of solution of iron albuminate. The variability of the commercial dried albumen and the disagreeable odor possessed by many samples necessitated this change.—*Proc. New Jersey Pharm. Assoc.* 1911, p. 81.

Fennel, Charles T. P., in discussing the unofficial formulæ, discusses the nature and composition of the available albumins.—*Proc. Ohio Pharm. Assoc.* 1911, p. 122.

Whitney, Mrs. D. V., thinks the *N. F.* solution of albuminate of iron is not satisfactory, as it precipitates upon standing.—*Proc. Missouri Pharm. Assoc.* 1911, p. 100.

Thum, John K., states that the present *N. F.* formula for liquor ferri albuminati does not give a satisfactory preparation. He presents a formula and method of preparation which he asserts gives ideal results.—*Am. Druggist*, 1911, v. 58, p. 241.

LIQUOR FERRI ET AMMONII ACETATIS.

Sennewald, F. C., suggests using glycerin in place of sugar in the aromatic elixir used to flavor Basham's mixture.—*N. A. R. D. Notes*, 1911-12, v. 13, p. 406.

Nitardy, F. W., discusses the keeping of Basham's mixture and states that when placed on ice this preparation can be kept in perfect condition for six months.—*N. A. R. D. Notes*, 1911-12, v. 13, p. 144.

Davies, John J., states that for dispensing Basham's mixture he gets over the instability of the compound by making up a supply of this preparation, omitting the iron. When a prescription comes for Basham's mixture, he measures the prescribed quantity, and adds

the necessary amount of tincture of iron.—*Drug. Circ.* 1911, v. 55, p. 568.

Hommell, Philemon E., thinks the U. S. P. formula for Basham's mixture needs no improvement. The whole thing should be freshly made when wanted.—*Pract. Drug.* 1911, v. 29, July, p. 29.

LIQUOR FERRI CHLORIDI.

Bachman, Gustav, reports that 2 samples of solution ferric chloride analyzed contained respectively 9.97 and 10.01 per cent of Fe.—*Proc. Minnesota Pharm. Assoc.* 1911, p. 101.

An unsigned review of the Ph. Germ. V (*Pharm. J.* 1911, v. 86, p. 654) points out that the iron is now determined volumetrically.

Dutton, A. Stayt, notes a difference in the composition of liquor ferri perchloridi Ph. Brit., which in his opinion has greatly reduced its efficacy.—*Chem. & Drug.* 1911, v. 78, p. 578.

The Committee of Reference in Pharmacy (Third Report, p. 6) points out that at present the figures given for specific gravity and yield of oxide in liquor ferri perchloridi fortis are not consistent. It is recommended that the requirement as to yield of oxide remain unchanged. See also *Pharm. J.* 1911, v. 87, p. 590.

LIQUOR FERRI IODIDI N. F.

Dunn, W. R., in a paper on homemade chemicals, outlines a method for the preparation of liquor ferri iodidi pro syrupo.—*Brit. & Col. Drug.* 1911, v. 60, p. 57.

LIQUOR FERRI OXYCHLORIDI N. F.

Düsterbehn, F., points out that the dialyzed solution of oxychloride of iron is now official in the Ph. Germ., in place of the former solution of oxychloride of iron.—*Apoth.-Ztg.* 1911, v. 26, p. 215. See also *Pharm. J.* 1911, v. 86, p. 654.

Fennel, Charles T. P., states that the formula for solution of ferric oxychloride N. F. is deficient in hydrochloric acid, and that the hydrate is not completely dissolved even when heat is employed.—*Proc. Ohio Pharm. Assoc.* 1911, p. 122.

Whitney, Mrs. D. V., thinks that solution of oxychloride of iron, N. F., is more easily prepared than the old solution of dialyzed iron and keeps better.—*Proc. Missouri Pharm. Assoc.* 1911, p. 100.

Thum, John K., outlines several precautions to be observed in the making of solution of oxychloride of iron.—*Am. Druggist*, 1911, v. 58, p. 241.

LIQUOR FERRI PEPTONATI N. F.

Fennel, Charles T. P., in a discussion on unofficial formulæ, discusses the available peptonates and points out that while the formula for solution of peptonate of iron calls for peptone, presumably egg

peptone, the market apparently only abounds with meat peptones.—Proc. Ohio Pharm. Assoc. 1911, p. 122.

Whitney, Mrs. D. V., thinks that solution of peptonate of iron N. F. is little used.—Proc. Missouri Pharm. Assoc. 1911, p. 100.

LIQUOR FERRI PEPTONATI CUM MANGANO N. F.

Frazier, W. J., comments on the making of solution of peptonated iron and manganese and states that no difficulty is experienced, providing good materials are used.—Proc. Kansas Pharm. Assoc. 1911, p. 30.

Seel and Friederich report the examination of 3 samples of solution of iron and manganese peptonate and point out that while the iron and manganese content was fairly uniform the alcohol content varied from 7.53 to 10.84 per cent.—Ber. pharm. Gesellsch. 1911, v. 21, p. 140.

Hommell, Philemon E., says that in his experience an elixir of citrate of iron and quinine or an elixir of pyrophosphate of iron is preferable to solution of peptonate of iron, plain or with manganese. He asserts that the proteid iron preparations are not only unsatisfactory from a pharmaceutical standpoint, but also from a therapeutic one.—Pract. Drug. 1911, v. 29, July, p. 30.

LIQUOR FERRI PROTOCHLORIDI N. F.

Whitney, Mrs. D. V., asserts that this solution is rarely used.—Proc. Missouri Pharm. Assoc. 1911, p. 100.

LIQUOR FERRI SUBSULPHATIS.

Arny, H. V., reports on 11 samples of solution of ferric subsulphate; 8 samples full strength, the others contained from 11.6 to 12.8 per cent iron.—Proc. Ohio Pharm. Assoc. 1911, p. 126.

LIQUOR FERRI TERSULPHATIS.

Arny, H. V., reports on 3 samples of solution of ferric tersulphate; 2 full strength, the other contained 8.8 per cent iron.—Proc. Ohio Pharm. Assoc. 1911, p. 126.

LIQUOR FORMALDEHYDI.

Lloyd, Gordon, states that formaldehyde was given to us in 1867 by A. W. Hoffman.—Rocky Mountain Druggist, 1911, v. 25, Mar., p. 43.

Düsterbehn, F., points out that the Ph. Germ. V permits the presence of varying amounts of methyl alcohol in solution of formaldehyde.—Apoth.-Ztg. 1911, v. 26, p. 186.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 581) points out that the strength is now determined by adding a solution of sodium sulphite and phenolphthalein, and titrating with hydrochloric acid; formerly it was by adding ammonia, and titrating the excess after standing for an hour, with rosolic acid as indicator.

Linke, H., points out that the Ph. Germ. V requires 35 per cent formaldehyde in the official solution. The sample examined by him according to the Ph. Germ. method was found to contain 35.44 per cent.—Ber. pharm. Gesellsch. 1911, v. 21, p. 189.

Poulenc, Camille, reports a suggested correction in the text of the Codex assay method.—J. Pharm. et Chim. 1911, v. 4, p. 439.

Herrmann, Felix, outlines a simple method for the estimation of formaldehyde, using ammonium chloride followed by sodium hydroxide, so as to prevent the volatilization of either the formaldehyde or ammonium in the production of hexamethylenetetramine.—Chem. Ztg. 1911, v. 35, pp. 25–26.

Toder and Taggart have outlined the colorimetric determination of small quantities of formaldehyde.—Western Druggist, 1911, v. 33, p. 7.

Beythien, Hempel, and others, discuss the quantitative estimation of formaldehyde by the ammonia method.—Ztschr. Unters. Nahr. u. Genussm. 1911, v. 21, pp. 671–673.

Farbenfabriken vorm. F. Bayer & Co., Elberfeld, in German patent 230,236, Apr. 17, 1908, outline the production of gaseous formaldehyde, from polymerized HCHO.—Chem. Abstr. 1911, v. 5, p. 2699.

Meade, H. B., reports a number of experiments and concludes that formaldehyde is not produced when sugar is heated.—Proc. Pennsylvania Pharm. Assoc. 1911, pp. 311–312.

Kinoshita and Daido discuss the detection of formaldehyde in “sake” and outline a modified morphine-sulphuric acid method.—J. Pharm. Soc. Japan, 1911, June, p. 353. See also *Ibid.* Nov., p. 787.

Société l’Air Liquide (Fr. Pat. 426,873, May 14, 1910) describes a process in the manufacture of formaldehyde.—J. Soc. Chem. Ind. 1911, v. 30, p. 1087.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 32) report that 17 samples of solution of formaldehyde had a specific gravity of from 1.077 to 1.094 and varied in strength from 36.5 to 39 per cent HCHO.

Elvove, Elias, discusses the different methods proposed for the estimation of formaldehyde and recommends the use of a condensation method. A diluted solution of formaldehyde is mixed with potassium cyanide, then an acid solution of silver nitrate is added and the mixture titrated with potassium sulphocyanate, using ferric alum as an indicator.—Am. J. Pharm. 1911, v. 83, pp. 455–471.

Gehe & Co. (*Handelsbericht*, 1911, pp. 135-136) point out that the precipitation occurring in solution of formaldehyde exposed to low temperatures is the natural one produced by the production of paraformaldehyde. This precipitation should not occur above 0° in the ordinary 40 per cent solution.

Pearson, W. A., reports that 1 lot of formaldehyde solution was found which had largely been transformed into paraformaldehyde.—*Proc. Pennsylvania Pharm. Assoc.*, 1911, p. 123. See also *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 348.

Table showing some of the analytical results reported for formaldehyde.

Reporters.	Number of samples.		References.
	Examined.	Rejected.	
Street, John Phillips.....	11	3	Rep. Connecticut Agric. Exper. Sta. for 1910-11, p. 581. See also <i>Ibid.</i> pp. 562-564.
Bernegan, L. H.....	12	1	Proc. Pennsylvania Pharm. Assoc. 1911, p. 123.
Smith, Kline & French Co....	53	3	Analytical Report, 1911, p. 27.

Smith, R. I., recommends a mixture of formaldehyde, milk, and water as a cheap and effective poison for flies.—*Bull. North Carolina Bd. Health*, 1911, v. 26, p. 71.

"F. S. R." recommends formaldehyde to drive away mice.—*Pharm. J.* 1911, v. 87, p. 193.

Doerr and Rauditschek give a tabulated formula for the amounts of permanganate, formaldehyde, etc., required to disinfect rooms of different sizes.—*Pharm. Post*, 1911, v. 44, pp. 427-429. Also *Pharm. J.* 1911, v. 87, p. 233, and *Drug Topics*, 1911, v. 26, p. 330.

Wood, Horatio C., jr., in an article on the possibility of intestinal antiseptics, calls attention to the evident limitations of the use of solution of formaldehyde as an intestinal antiseptic.—*Therap. Gaz.* 1911, v. 35, pp. 153-156.

Frahm, Frederick W., discusses the treatment of blind abscesses with paraform.—*Dental Cosmos*, 1911, v. 53, pp. 1029-1030.

Grove, Carl J., discusses the chemical action of formaldehyde in pulp decomposition.—*Ibid.* pp. 1376-1379.

Herzog and Betzel report some observations on the disinfectant properties of formaldehyde.—*Ztschr. physiol. Chem.* 1911, v. 74, pp. 230-231.

Riedel's *Berichte* (1911, p. 75) quotes B. Hannes, who outlines a method for the disinfection of rooms by means of formaldehyde and permanganate.

Additional references on the chemistry and uses of formaldehyde will be found in the *J. Am. M. Assoc.*, and *Chem. Abstr.*

LIQUOR MAGNESII CITRATIS.

Wimmer, Curt P., reviews the evolution of effervescent solution of magnesium citrate and points out that the original formula was devised by a Frenchman, Roge Delabarre. The formula was introduced in the Pharmacopœia of 1850 and has been retained with numerous modifications since that time. He also discusses some of the causes for the precipitation frequently noted in this preparation.—D.-A. Apoth.-Ztg. 1911-12, v. 32, pp. 108-109.

Hull, Seymour C., suggests that the formula for solution of magnesium citrate be modified so that a stable preparation could be prepared.—Proc. New York Pharm. Assoc. 1911, p. 92.

Davies, John J., states that solution of magnesium citrate keeps better when saturated with carbon dioxide. He adds one half of the required amount of potassium bicarbonate at the time of making the solution and the remaining bicarbonate at the time of dispensing, so as to insure the presence of carbon dioxide.—Drug. Circ. 1911, v. 55, p. 568.

Allen, M. D., discusses the making of effervescent solution of magnesium citrate and presents a formula. He finds that one sterilization is as efficient as two or three.—Am. J. Pharm. 1911, v. 83, pp. 564-566.

An editorial (Drug Topics, 1911, v. 26, pp. 353-354) points out that there is considerable room for improvement in connection with solution of magnesium citrate. It is rare to find two druggists' preparations of this solution to taste alike.

Ford, Charles M., commenting on carelessness in the making of "citrate of magnesia," points out that when this preparation has passed through the wedgewood mortar, which holds in its pores the remnants of hundreds of operations, is further contaminated by some imperfectly glazed or galvanized vessel, and then filtered in the balmy atmosphere of the shop, Omniscience only knows what it may contain in addition to what is required by the United States Pharmacopœia.—Drug. Circ. 1911, v. 55, p. 625.

LIQUOR PHOSPHATUM ACIDUS N. F.

Whitney, Mrs. D. V., asserts that acid solution of phosphates, N. F., is principally used at soda fountains.—Proc. Missouri Pharm. Assoc. 1911, p. 101.

LIQUOR PICIS ALKALINUS N. F.

In making a solution of tar the Australasian Pharmaceutical Formulary uses resin soap instead of tincture of quillaia, the resin soap having been found to be equally as effective and not so costly.—Chem. & Drug. Australas. 1911, v. 26, p. 59.

LIQUOR PLUMBI SUBACETATIS.

The Committee of Reference in Pharmacy (Third Report, p. 7) recommends, for the preparation of the strong solution of lead acetate, that the solid ingredients be mixed with three-fourths of the water (15 fl. oz. or 750 cc., respectively) and allowed to stand for 48 hours with occasional agitation, the filtrate being made up to volume by washing the filter with distilled water.—See also Pharm. J. 1911, v. 87, p. 590.

Gardner (Med. Rec. Aug. 20, 1910) calls attention to the use of lead and opium wash in the treatment of rhus poisoning.—Therap. Gaz. 1911, v. 35, p. 112.

LIQUOR POTASSII ARSENITIS.

Stöcker discusses the nature of the official Ph. Germ. V solution of potassium arsenite and points out that the amount of potassium bicarbonate is insufficient to saturate all of the arsenic trioxide.—Apoth.-Ztg. 1911, v. 26, p. 335.

Schenk, in commenting on the criticism by Stöcker, points out that although the amount of potassium bicarbonate in the Ph. Germ. V formula is insufficient to saturate all of the arsenous acid, the resulting preparation is nevertheless uniform.—*Ibid.* p. 379.

Ziegler, J., reports some experiments with the Ph. Germ. V formula for solution of potassium arsenite and disagrees with the findings of Stöcker.—*Ibid.* pp. 401-402.

Street, John Phillips, discusses the examination of Fowler's solution, outlines his methods of analysis, and reports that the arsenic oxide ranged from 0.006 to 0.126 per cent. The solutions showed wide differences of color, fourteen samples varying from yellowish to dark yellow, and one being colorless.—Rep. Connecticut Agric. Exper. Sta. for 1910-11, pp. 564-568.

Cook, Alfred N., states that some samples of Fowler's solution examined have been very weak, perhaps indicating that they were old and had deteriorated on the shelves of the pharmacist. One wholesale house was found to be putting out Fowler's solution over two and one-half times U. S. P. strength.

Wilson, R. C., reports that the samples of Fowler's solution examined varied from 50 to 109 per cent U. S. P. strength.—Proc. Georgia Pharm. Assoc. 1911, p. 35.

Utech, P. Henry, urges strict adherence to the official directions in order to avoid difficulties in the preparation of Fowler's solution. The coloring principle in the compound spirit of lavender is santalin, which is resinous in character. By adding the tincture to the hot solution this is precipitated, causing the trouble referred to.—Western Druggist, 1911, v. 33, p. 14.

Table showing some of the analytical results reported for solution of potassium arsenite.

Reporters.	Number of samples.		References.
	Examined.	Rejected.	
Army, H. V.....	16	6	Proc. Ohio Pharm. Assoc. 1911, p. 126.
Bachman, Gustav.....	2	1	Proc. Minnesota Pharm. Assoc. 1911, p. 101.
Lynch, R. L.....	8	4	Rep. District of Columbia Health Off. for 1911, p. 68.
Porter, C. S.....	19	14	Am. Druggist, 1911, v. 59, p. 42.
Street, John Phillips.....	55	30	Rep. Connecticut Agric. Exper. Sta. for 1910-11, p. 581.

LIQUOR SODII ARSENATIS, PEARSON, N. F.

Whitney, Mrs. D. V., points out that Pearson's solution of sodium arsenate is one-tenth the strength of the U. S. P. solution of sodium arsenate.—Proc. Missouri Pharm. Assoc. 1911, p. 102.

LIQUOR SODII BORATIS COMPOSITUS.

Buckner, J. C., outlines a method of assay for Dobell's solution and states that the variations in the analyzed samples shows carelessness in their manufacture.—Proc. Texas Pharm. Assoc. 1911, pp. 102-104.

LIQUOR SODÆ CHLORINATÆ.

The Committee of Reference in Pharmacy (Third Report, p. 8) recommends that the solution of chlorinated soda be freshly prepared. See also Pharm. J. 1911, v. 87, p. 590.

Gildemeister, E., reports experimental observations on the action of a solution of sodium hypochlorite, 6.5 per cent, and of sodium hydroxide, 7.5 per cent in water. He concludes that the solution had hæmolytic properties that are variable and are materially reduced by the presence of the serum of guinea pigs. Serum albumin is rapidly changed so that it no longer precipitates.—Arb. k. Gsndhtsamte, 1911, v. 38, pp. 164-186.

LIQUOR SODII PHOSPHATIS COMPOSITUS.

Glover, W. H., presents a formula for compound solution of sodium phosphate in which he recommends the use of glycerin as a solvent, in place of water.—Drug. Circ. 1911, v. 55, p. 410.

LITHII BROMIDUM.

Baxter, Boylston, Mueller, Black and Goode, in a report on the refractive power of halogen salts, present a table showing the results of their observations with purified lithium bromide.—J. Am. Chem. Soc. 1911, v. 33, pp. 901-922.

LITHII CARBONAS.

Düsterbehn, F., points out that the Ph. Germ. V now describes lithium carbonate as occurring as a light, white powder permanent in the air and soluble in about 80 parts of water, less soluble in hot water.—Apoth.-Ztg. 1911, v. 26, p. 224.

See also Chem. & Drug. 1911, v. 78, p. 47.

The Committee of Reference in Pharmacy (Third Report, p. 8) notes that the details of the present assay of lithium carbonate Ph. Brit. are incorrect and correspond to 99.5 per cent of Li_2CO_3 , instead of 98.5 per cent. The latter strength is suggested, and a volumetric instead of a gravimetric assay. See also Pharm. J. 1911, v. 87, p. 590.

Smith, Kline & French Co. (Analytical Report, 1911, p. 27) reports that 1 sample of lithium carbonate was assayed; strength 99.04 per cent.

Rabe, R. P., states that lithium carb is indicated in cases of palpitation from emotion.—Hahnemann. Month. 1911, v. 46, p. 400.

LITHII CITRAS.

The Committee of Reference in Pharmacy (Third Report, p. 8) notes that the hydrated salt of lithium citrate is not deliquescent, and all reference to the loss of water on heating should be deleted. It should contain 98.5 per cent of lithium citrate, $\text{Li}_3\text{C}_6\text{H}_5\text{O}_7 \cdot 4\text{H}_2\text{O}$, and the strength should be determined by igniting and titrating the ash. A limit for lead of 5 parts per million is recommended. See also Pharm. J. 1911, v. 87, p. 590.

LOBELIA.

Lloyd, John Uri, states that *Lobelia inflata*, or Indian tobacco, was conspicuously introduced by Samuel Thomson in the beginning of the nineteenth century. It has been, in domestic medication, in the practice of the Thomsonians, and also of the Eclectics, one of the most valued remedial agents of the American flora.—Bull. Lloyd Libr. 1911, No. 18, pp. 55–56. Also Eclectic Med. Glean. 1911, v. 7, pp. 408–409, and Merck's Rep. 1911, v. 20, p. 128.

Henkel, Alice, describes and illustrates *Lobelia inflata* L., also gives synonyms, other common names, the habitat and range, and some data on the collection, prices, and uses.—Bull. Bur. Plant. Ind. U. S. Dept. Agric. 1911, No. 219, p. 35.

The Committee of Reference in Pharmacy (Third Report, p. 8) recommends an ash limit for lobelia of 12 per cent. See also Pharm. J. 1911, v. 87, p. 590.

Hartwich, C., calls attention to the fact that the Ph. Germ. V requires that lobelia be gathered toward the end of the flowering time.—Apoth.-Ztg. 1911, v. 26, p. 33.

Schneider, Albert, reports on a sample of lobelia which was adulterated, the entire herb being used.—Pacific Pharm. 1911, v. 5, p. 180.

Howes, Pitts Edwin, states that the best preparation of lobelia is the tincture made from the seed.—J. Therap. & Diet. 1911, v. 5, p. 207.

Waddington, J. E. G., reports observations on the hypodermic use of lobelia and expresses the belief that the drug used in this way will take the place of antitoxins. Ellingwood's Therap. 1911, v. 5, pp. 52-53.

An editorial (Eclectic Med. Glean. 1911, v. 7, pp. 540-541) calls attention to a collective investigation of the uses of lobelia hypodermatically used, that is being made by Finley Ellingwood.

Jentzsch, J. E., states that lobelia and the sweat bath will abort and overcome many of the congestive diseases, and that Thomson has certainly given to the world the greatest and most valuable medicinal agent.—Nat. Eclect. M. Assoc. Quart. 1910-1911, v. 2, pp. 222-226.

Arndt, D. C., reports that he gave a patient who thought he was a chicken 30 minims of hypodermic lobelia, and in an hour the patient was quieter.—Eclectic M. J. 1911, v. 71, p. 590.

Waddington, Joseph E. G., in a review of the therapeutics of lobelia, states that lobelia is the specific remedy for the specific condition of embarrassed and impeded respiration.—Nat. Eclect. M. Assoc. Quart. 1910-1911, v. 2, pp. 99-101.

Kopp, Frederick, states that lobelia inflata should be thought of in fever and ague when the chill comes on in the middle of the day, and is followed by heat and perspiration, lasting until the following morning. There is also a shuddering and sensation of heat in the daytime.—Hahnemann. Month. 1911, v. 46, p. 476.

Webb, Frank, discusses the hypodermic use of lobelia and states that he never lost a case of diphtheria after he began to use the nonalcoholic preparation.—J. Therap. & Diet. 1911, v. 5, p. 234.

LUPULINUM.

Caesar & Loretz (Jahres-Bericht, 1911, p. 39) point out that the quality of the available lupulin leaves much to be desired. It is practically impossible to secure a sample of the drug with less than 12 per cent of ash.

Bernegau, L. H., reports that 3 lots of lupulin tested 58.9, 57.7, and 62.1 per cent soluble in ether, and contained 15, 16.4 and 14.36 per cent ash.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 125.

Francis, J. M., reports that of 8 lots of lupulin examined, only one failed to exceed the required 60 per cent of ether soluble matter, all exceeded the U. S. P. ash limit of 10 per cent, ranging from 10.3 to 31.1 per cent.—*Ibid.* p. 125.

LYCOPODIUM.

Lloyd, John Uri, states that the spores of lycopodium have been used in domestic therapy as an application to fresh wounds, and have thus a reputation as an absorbent styptic. It is employed in Homœopathic and Eclectic medication.—Bull. Lloyd Libr. 1911, No. 18, pp. 56–57.

Pretz, Harold W., reports that *Lycopodium clavatum* L. and other species have been found and occur more or less generally in Lehigh County, Pennsylvania.—Bull. Torrey Bot. Club, 1911, v. 38, p. 74.

Bruchmann, H. (Flora, 1910, v. 101, pp. 260–267; 35 Abb.), reports on the germination of the spores and the development of the prothallia of *Lycopodium clavatum* L., *L. annotinum* L. and *L. selago* L.—Bot. Centralbl. 1911, v. 116, p. 84.

Hartwich, C., points out that the Ph. Germ. V has reduced the ash limit for lycopodium from 5 to 3 per cent.—Apoth.-Ztg. 1911, v. 26, p. 34.

See also Pharm. J. 1911, v. 86, p. 654.

Caesar & Loretz (Jahres-Bericht, 1911, p. 44) note that the ash of a good quality of drug usually varies from 1.6 per cent to 3 per cent.

“D. B.” reports that, according to W. Mitlacher, the Austrian inspection of pharmacies shows the addition of starch and of a coniferous pollen, etc., which may be recognized immediately under the microscope.—Bull. sc. pharmacol. 1911, v. 18, Annexes, p. 10.

Caesar & Loretz (Jahres-Bericht, 1911, p. 118) discuss the method of determining the ash content of lycopodium and present a table showing the limitations for ash included in the several pharmacopœias.

An editorial (Eclectic Med. Glean. 1911, v. 7, p. 14) states that, while lycopodium is thought of by many as a dusting powder and a constituent of fireworks, as a matter of fact, when properly tinctured, it is a valuable remedy in fevers showing obscure periodicity, in digestive disorders as an antiferment, and in affections of the renal apparatus, with or without painful urination.

Royal, George, states that lycopodium is only useful in chronic cases.—Hahnemann. Month. 1911, v. 46, p. 554.

Webster, Herbert T., believes that lycopodium is one of the remedies which act best when highly attenuated. He adds that he might have seen better results from it if he had used the twelfth or a higher attenuation.—Eclectic M. J. 1911, v. 71, pp. 118–121.

MAGMA OF BISMUTH.

Lippincott, Charles D., presents a formula for milk of bismuth in which he uses bismuth subnitrate, glycerin, and distilled water.—Rocky Mountain Druggist, 1911, v. 25, Oct. p. 14.

Craig, Hugh, reports that in connection with milk of bismuth the use of trade-marked names was commented upon. The recognition of a method for the assay of this preparation was considered advisable.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 607.

MAGMA MAGNESIÆ N. F.

Hilton, S. L., presents a formula and an assay process for magma magnesiae.—Am. J. Pharm. 1911, v. 83, pp. 268–269. See also Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 248–250, and pp. 132–133.

Craig, Hugh, reports that a method for the assay of this preparation was considered advisable.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 607.

An editorial note (Pharm. J. 1911, v. 86, p. 546) criticizes the use of gelatin in the preparation of magma magnesiae because in an alkaline medium gelatin behaves as an ideal nidus for bacterial growth. Furthermore, there is great variability in different samples of gelatin in gelatinizing power and commercial gelatin is notorious as a carrier of impurities.

Hilton, S. L., calls renewed attention to the desirability of including an assay method for magma of magnesia.—Am. Druggist, 1911, v. 58, p. 349.

Lippincott, Charles D., presents a formula for milk of magnesia in which he uses calcined magnesia, simple syrup, glycerin, and lime water.—Rocky Mountain Druggist, 1911, v. 25, Oct. p. 14.

Kaiser, W. F., submits a formula for making milk of magnesia on short notice at a cost of 10 cents a pint.—Southern Pharm. J. 1910–11, v. 3, p. 169.

Dunn, W. R., in a paper on homemade chemicals, outlines a method for the preparation of emulsion of magnesia, using potassium hydroxide; thorough distribution of the hydrate solution is essential to the production of a large precipitation.—Brit. & Col. Drug. 1911, v. 60, p. 57.

Mackay and Cowley, in discussing a formula for emulsion of magnesia, point out that, while the resulting light precipitate takes time to wash, it requires only occasional attention and the total amount of time required is not great.—Chem. & Drug. Australas. 1911, v. 26, p. 188.

MAGNESII CARBONAS.

Düsterbehn, F., points out that the Ph. Germ. V describes magnesium carbonate as a basic salt, varying somewhat in composition according to the methods employed in its making.—Apoth.-Ztg. 1911, v. 26, p. 225.

The Paria Pharmaceutical Society suggests a more specific wording, with definite amounts, for the Codex assay process.—J. Pharm. et Chim. 1911, v. 4, p. 440.

The Committee of Reference in Pharmacy (Third Report, p. 8) recommends that the light and heavy magnesium carbonate be described as hydrated carbonates of magnesium, but that the formulas be omitted; a limit for lead, 20 parts per million, is recommended.—See also *Pharm. J.* 1911, v. 87, p. 8.

Smith, Kline & French Co. (Analytical Report, 1911, p. 27) reports that 3 of the 7 samples of magnesium carbonate examined were found to contain a slightly abnormal amount of heavy metals and foreign soluble salts.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 36) report that some difficulty is experienced in obtaining magnesium carbonate sufficiently free from sulphates.

Pearson, W. A., reports that one sample of candy dusting powder contained magnesium carbonate and cornstarch.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 344.

MAGNESII OXIDUM.

The Committee of Reference in Pharmacy (Third Report, p. 8) recommends that both *magnesia levis* and *magnesia ponderosa* be retained, as both are largely used medicinally; they should be required to be free from aluminum and copper, and to give not more than the slightest reaction for iron, carbonates, and sulphates. A limit for lead of 20 parts per million is recommended. See also *Pharm. J.* 1911, v. 87, p. 590.

The Paris Pharmaceutical Society suggests a more specific phraseology in the Codex description.—*J. Pharm. et Chim.* 1911, v. 4, p. 440.

The Biennial Report of the Inspection of Pharmacies, 1909-1910, states that calcined magnesia is generally more or less carbonated; formerly also adulterated by a notable quantity of lime and by oxides of iron and aluminum.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 235, and *J. Pharm. Anvers*, 1911, v. 67, p. 523.

Smith, Kline & French Co. (Analytical Report, 1911, p. 56) calls attention to a paper on calcined magnesia by W. A. Pearson (*Proc. Pennsylvania Pharm. Assoc.* 1910, p. 222).

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 48) report on an inferior sample of magnesium oxide which gave 82.3 per cent MgO on ignition and estimated at 77 per cent MgO volumetrically, adding excess N/10 acid and back titrating, using methyl orange; the degree of hydration and the proportion of CO₂ being in excess of the usual 15 per cent loss.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 36) report that some difficulty is experienced in obtaining the heavy variety of magnesia sufficiently free from sulphates to comply with the somewhat vaguely worded official test.

MAGNESII SULPHAS.

Bowersox, Charles H., presents a brief note on the history of Epsom salts.—*Western Druggist*, 1911, v. 33, p. 77.

Sharp, Gordon, states that magnesium sulphate, Epsom salts, and formerly known as English salt, Seidlitz salt, cathartic salt, vitriolated magnesia, physical salt (to distinguish it from common table salt), and bitter, purging salt, in distinction to Glauber salt, which was not supposed to be bitter, was first obtained from the Epsom spring; hence the name by which it is commonly called.—*Drug Topics*, 1911, v. 26, p. 53.

Düsterbehn, F., points out that the Ph. Germ. V now describes magnesium sulphate as occurring in permanent, colorless crystals, soluble in about 0.3 part of boiling water.—*Apoth.-Ztg.* 1911, v. 26, p. 225.

An unsigned review (*Chem. & Drug*, 1911, v. 78, p. 47) notes that the Ph. Germ. V requirement for magnesium sulphate includes the Bettendorf test for arsenic as well as a method to determine the presence of an undue amount of sodium sulphate.

The Committee of Reference in Pharmacy (Third Report, p. 9) recommends a limit test for arsenic, as well as for lead, but suggests neither. A test for iron and insoluble impurities is suggested and it is proposed that the tests for aluminium, zinc, calcium, sodium, potassium and ammonium be omitted. See also *Pharm. J.* 1911, v. 87, p. 590.

Lilly, J. K., points out that magnesium sulphate is frequently of inferior quality and the purchaser should insist that the article be pure and meet U. S. P. requirements.—*Proc. N. W. D. A.* 1911, p. 160.

Dunlap, Renick W., reports that a sample of Epsom salts examined was not passed.—*Rep. Ohio Dairy & Food Com.* 1910, p. 47.

Smith, Kline & French Co. (Analytical Report, 1911, p. 27) reports that 11 of the 17 samples of magnesium sulphate examined contained chlorides ranging from 0.61 per cent to 0.099 per cent. Several samples were rejected.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 37) report that many samples of magnesium sulphate have been offered containing an excessive proportion of chlorides; in three cases where the amount was determined the figures were 0.12 to 0.43 per cent (MgCl_2).

The Biennial Report of the Inspection of Pharmacies, 1909–1910, notes that the pharmacopœia calls for the pure English salt. A number of druggists and certain pharmacists have only the English salt contaminated by chlorides.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 235. Also *J. Pharm. Anvers*, 1911, v. 67, p. 523.

Düsterbehn, F., points out that the official Ph. Germ. V dried magnesium sulphate may lose the equivalent of 30 per cent of water

on heating to 100°, and should be kept in well-closed containers.—Apoth.-Ztg. 1911, v. 26, p. 225.

Puckner and Warren report an examination of commercial samples of dried magnesium sulphate, and state that the material as found on the American market is far from being uniform in composition.—Am. J. Pharm. 1911, v. 83, pp. 261–265. Also Rep. Chem. Lab. Am. M. Assoc. 1911, v. 4, pp. 33–37.

Johann, Ernest J., outlines a modified formula for effervescent magnesium sulphate to include magnesium carbonate, which imparts the property of slow effervescence, and a suitable amount of sugar to make the resulting preparation more palatable.—Proc. Virginia Pharm. Assoc. 1911, p. 97.

An editorial (Phys. Drug. News, 1911, v. 6, p. 324) presents a formula for a palatable solution of Epsom salts. The solution is flavored with coffee and oils of cassia, cloves, anise, and sassafras, and sweetened with saccharin.

An abstract from the Medical Record calls attention to the use of magnesium sulphate solution in the form of moist compresses for superficial inflammation.—Drug Topics, 1911, v. 26, p. 56.

Choksy, Khan Bahadur N. H., contributes a note on the external application of magnesium sulphate in the treatment of erysipelas, with a report of 4 cases.—Lancet, 1911, v. 180, p. 300.

Wike, B., reports observations on the local anæsthetic action of magnesium sulphate.—Arch. internat. pharmacod. et thérap. 1911, v. 21, pp. 415–423.

Fauré-Fremiet, E., discusses the action of magnesium sulphate in concentrated solution on certain protoplasms.—Compt. rend. Soc. Biol. 1911, v. 71, p. 316.

Weise, Paul, reports experimental observations on the nature of the resorption in the small intestine of hypertonic solutions of sodium sulphate and magnesium sulphate.—Arch. internat. pharmacod. et thérap. 1911, v. 21, pp. 77–104.

De Heer, J. L., Jr., reports some experimental observations on the theory of the cathartic action of magnesium sulphate.—*Ibid.* pp. 321–338.

Boos, W. F., reports 10 cases of poisoning by magnesium sulphate—7 taken from literature, 2 personal observations, and 1 taken from the records of the Massachusetts General Hospital.—Merck's Arch. 1911, v. 13, pp. 21–22.

An editorial (Therap. Gaz. 1911, v. 35, p. 338) calls attention to the article by Boos on magnesium poisoning.

Dixon, W. E., states that were one-tenth part of the usual dose of Epsom salts absorbed into the system severe cardiac symptoms would result.—Pharm. J. 1911, v. 87, p. 15.

Holman, Carl J., discusses the treatment of tetanus, with special reference to the use of magnesium sulphate, which he believes will

probably control the convulsions, thus providing for the nourishment of the patient while antitoxines are being formed to overcome the toxins.—*Merck's Arch.* 1911, v. 13, pp. 176–180.

Barge, A. A., urges the use of magnesium sulphate in the treatment of dysentery and presents a formula.—*J. Am. M. Assoc.* 1911, v. 56, p. 1593.

An editorial (*Phys. Drug News*, 1911, v. 6, p. 125) states that Epsom salt ranks second in importance for use in the tropics.

Jackson, Algernon Brashear, recommends the injection of magnesium sulphate for acute articular rheumatism, with report of cases.—*N. York M. J.* 1911, v. 93, pp. 1223–1225.

Heeve, William L., states that two grains of magnesium sulphate and ten drops of diluted sulphuric acid will prove of value in diarrhoea.—*Nat. Eclect. M. Assoc. Quart.* 1910–11, v. 2, p. 122.

Harvey, G. W., states that when a patient comes to us with warts we give him small doses of thuja or magnesium sulphate, knowing that if he is faithful in taking the medicine the warts will disappear in a reasonable time.—*Hahnemann. Month.* 1911, v. 46, p. 637.

Additional references on the chemistry, pharmacology and therapeutic uses of magnesium sulphate will be found in: *Index Med.*; *J. Am. M. Assoc.*; and *Chem. Abstr.*

MALTUM.

Lloyd, John Uri, states that the time of the introduction of malt antedates the lore of systematic medication. Malt liquors have been in domestic use, both as a beverage and an extract, for a long period.—*Bull. Lloyd Libr.* 1911, No. 18, p. 57.

Dohme and Engelhardt think that it would be advisable to give assay processes for the determination of maltose and diastatic power. They have met with numerous samples of malt which were deficient in both respects.—*Am. J. Pharm.* 1911, v. 83, p. 523.

O'Sullivan, J. (*J. Inst. Brew.* 1911, v. 17, pp. 35–42) describes an improvement in the method of malt analysis.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 230. Also *Analyst*, 1911, v. 36, p. 146.

Wilde, C. (*Ann. Brass. Dist.* 1910, p. 514), describes a rapid method for the determination of extract of barley.—*Ann. falsif.* 1911, v. 4, p. 164.

Winde, O. (*Eng. Pat.* 29,071, Sept. 13, 1910), describes a process for the manufacture [steeping] of malt.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 567.

Schliephacke, Gerhard, reports some observations on the mutarotation of maltose.—*Ann. d. Chem.* 1910, v. 377, pp. 164–165.

Zimmerman, A., reports observations on the acceleration of the starch converting properties of malt by minute quantities of hydrochloric acid.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 823–826.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 49) report having observed the following variations in samples of malt extract: B. P. C. diastasic value 10 to 1050, speed diastasic action 1.5 to 15, sugars as maltose 67.2 to 70.2 per cent, moisture 19.3 to 35 per cent, and specific gravity 1.415 to 1.468.

Tankard, Arnold Rowsby, thinks too high a value is placed upon the diastasic power of some malt extract preparations.—Pharm. J. 1911, v. 87, p. 73.

An unsigned article (N. A. R. D. Notes, 1911, v. 12, p. 18) states that malt extract is in many respects a very important pharmaceutical and is deserving of a much greater popularity than it at present enjoys.

Additional references will be found in Chem. Abstr.; J. Soc. Chem. Ind.; and Chem. Centralbl.

MANNA.

Lloyd, John Uri, states that manna has been used as a domestic remedy from all time as a gentle laxative, and in more recent years to modify the griping qualities of a mixture of senna and jalap.—Bull. Lloyd Libr. 1911, No. 18, p. 57.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 654) points out that in the determination of mannitol the quantity of alcohol to be used is doubled, and it is now extracted by boiling for an hour instead of being merely heated to boiling as before; the amount of mannitol is required to be not less than 75 per cent.

The Biennial Report of the Inspection of Pharmacies, 1909–1910, states that manna was found to be sticky, decomposed, and non-official.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 230. Also J. Pharm. Anvers, 1911, v. 67, p. 518.

Otto, E. (Münch. med. Wchnschr. 1911, p. 1799), recommends the use of manna electa or extractum gentianæ spissum to prevent pills from becoming so hard as to be partially or wholly insoluble in the stomach.—Merck's Ann. Rep. 1911, v. 25, p. 302.

MARRUBIUM.

Lloyd, John Uri, states that horehound was early introduced into domestic medicine as a bitter decoction.—Bull. Lloyd Libr. 1911, No. 18, p. 58.

Henkel, Alice, describes and illustrates horehound, *Marrubium vulgare* L., also gives synonyms, other common names, the habitat and range, and some data on the collection, prices, and uses.—Bull. Bur. Plant Ind. U. S. Dept. Agric. 1911, No. 219, p. 23.

Rusby, H. H., criticizes the pharmacopœial description of the official parts of the plant. It may be flower bearing for most of its length. It should be specified that the tops which are gathered should not exceed a certain length, about three or four inches being probably correct.—Pharm. Era, 1911, v. 44, p. 94.

MASSA FERRI CARBONATIS.

Hommell, P. E., thinks that *massa ferri carbonatis*, or Vallet's mass, should be deleted from the U. S. P. It has seen better days.—Proc. New Jersey Pharm. Assoc. 1911, p. 86. Also Pract. Drug. 1911, v. 29, July, p. 29.

Beringer, George M., Jr., presents a formula for powdered Blaud's mass consisting of exsiccated ferrous sulphate, potassium carbonate, powdered sugar, powdered acacia and a sufficient amount of water to decompose the ferrous salt.—Proc. New Jersey Pharm. Assoc. 1911, p. 71.

MASTICHE.

Lloyd, John Uri, states that the origin of the use of mastic was lost in antiquity. Theophrastus, Dioscorides and Pliny refer to it and the drug is even now sold in all oriental bazars as a breath sweetener and as a flavor for cordials and other drinks.—Bull. Lloyd Libr. 1911, No. 18, p. 58.

Hicks, Edwin F., in a note on new color reactions for some of the resins with Halophen's reagent for colophony, states that mastic yields a reddish-brown, becoming almost a carmine nearest bromine vapors. A coffee-brown tint is produced at the far side of the test.—J. Ind. & Eng. Chem. 1911, v. 3, pp. 86-87.

Voos, F. W., calls attention to mastisol, a solution of mastic in benzol.—Apoth.-Ztg. 1911, v. 26, p. 275.

MATICO.

Lloyd, John Uri, states that matico came to the attention of the profession of medicine in the beginning of the Nineteenth Century, being conspicuously introduced by Jeffreys, a physician of Liverpool, who commended it as a styptic and astringent.—Bull. Lloyd Libr. 1911, No. 18, pp. 58-59.

Schneider, Albert, describes some structural characteristics and states that matico leaves are not generally adulterated, but often contain an excess of sand and are carelessly cured.—Merck's Rep. 1911, v. 20, p. 2.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 28) report that a single sample of oil of matico tested proved to give satisfactory figures: specific gravity 0.9725; refractive index, 1.5075.

MATRICARIA.

Lloyd, John Uri, states that *matricaria* has been in domestic use so long as to have made it familiar to all German housewives.—Bull. Lloyd Libr. 1911, No. 18, p. 59.

Mitlacher, Wilhelm, reports having poor success in trying to cultivate *Matricaria chamomilla*, the seed evidently being of inferior quality and the resulting plants a failure.—Pharm. Post, 1911, v. 44, p. 215.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, p. 32) report that the chamomile crop, especially in Hungary, has been very plentiful.

Hartwich, C., thinks that, in view of the fact that chamomile is frequently used in powdered form, a description of the microscopical appearance of the hairs, pollen, and other structural characteristics of the flowers might have been included in the Ph. Germ. V.—Apoth.-Ztg. 1911, v. 26, p. 7.

Linke, H., points out that the Ph. Germ. V requires that the official drug consist of the flowering heads, while the commercial article consists largely of stems.—Ber. pharm. Gesellsch. 1911, v. 21, p. 189.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 76), from published data and their own experience, suggest the following limitation of the constants for oil of chamomile; specific gravity (15/15°) 0.905 to 0.915, optical rotation (20° to 25°) -1° to $+3^{\circ}$, refractive index (20°) 1.4427 to 1.444 (1.465), soluble in 1 volume of 90 per cent and 8 volumes of 70 per cent alcohol, and saponification value 250 to 317.

Majumdar, P. C., states that chamomilla as a remedy for toothache is more frequently indicated in children and nervous patients who drink a good deal of coffee, in females before and during menses.—Hahnemann. Month. 1911, v. 46, p. 633.

Jones, Eli G., gives tincture of chamomilla to a baby that screams with pain, draws its little legs up, whose abdomen is bloated as tight as a drum.—J. Therap. & Diet. 1911, v. 5, p. 139.

Reed, A. P., states that the German variety of chamomilla is probably more effective than the Roman or home-grown variety as found in the typical grandmother's garden. It is an old-fashioned but efficient remedy for fever conditions, acid diarrhœas, with green stools, colic, etc.—Eclectic Med. Glean. 1911, v. 7, p. 597.

MEL.

Lloyd, John Uri, states that honey is familiar to all civilized peoples as well as to the natives of many sections of the world. The domestic record of honey is lost in antiquity.—Bull. Lloyd Libr. 1911, No. 18, p. 59.

Hartwich, C., comments on the Ph. Germ. V description for honey, and expresses the belief that the name of the honey bee might have been added. He points out that the acid content (0.23 per cent) will be readily complied with. The variation of ash (0.1 to 0.8 per cent) is perhaps a little low, as samples of genuine honey have been found to yield as much as 1.06 per cent of ash.—Apoth.-Ztg. 1911, v. 26, p. 34.

See also Pharm. J. 1911, v. 86, p. 654.

The Committee of Reference in Pharmacy (Third Report, p. 9) suggests a monograph for honey, defined as coming from *Apis mellifica* L., and probably other species. See also Pharm. J. 1911, v. 87, p. 591.

Phillips, E. F., in an article on the keeping of bees for pleasure and profit, describes and illustrates the arrangement of the apiary and the tools necessary for the apiarist.—Sc. Am. Suppl. 1911, v. 71, pp. 108–110, 124–126, 140–143.

The Consular and Trade Reports (May 18, 1911, p. 744) quotes from the Bureau of Statistics the imports of honey into the United States during the fiscal years ending June 30, 1909 and 1910, amounting to 145,691 and 103,640 gallons, respectively

Gehe & Co. (Handelsbericht, 1911, pp. 86–87) discuss the importation of honey into Germany, and present a table showing the origin of the honey imported into Hamburg during the years 1909–10. They also commend the Ph. Germ. V standard for honey.

Küstenmacher, M., reports some observations on the chemistry of the formation of honey in the honey bee.—Biochem. Ztschr. 1911, v. 30, pp. 237–254.

Korndoerfer, A., discusses the inversion of sugar by the honey bee.—Apoth.-Ztg. 1911, v. 26, p. 659.

Lendrich and Nottbohm report observations on the composition of foreign honeys.—Ztschr. Unters. Nahr. u. Genussm. 1911, v. 22, pp. 633–643.

Rosenthaler, L., reports observations on the mutarotation of honey, and presents tables showing the results obtained with 48 different samples.—*Ibid.* pp. 644–647.

Moreau, Edmond, makes a contribution to the study of French honeys, with tabulated statement of results.—Bull. sc. pharmacol. 1911, v. 18, pp. 470–477.

Ronnet, Léon, contributes a brief analytical study of the honey of Champagne, with tabulated results.—Ann. falsif. 1911, v. 4, pp. 427–429.

Gottfried, Arthur, presents some observations on the manganese content of commercial honey and several tables showing the variation in the amount found.—Pharm. Zentralh. 1911, v. 52, pp. 787–788.

Heiduschka, A., reports some observations on the acids in honey.—Ztschr. allg. osterr. Apoth.-Ver. 1911, v. 49, pp. 419–420. See also Pharm. Post, 1911, v. 44, pp. 825–826; Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, pp. 725–727; Pharm. Zentralh. 1911, v. 52, pp. 1051–1053, and Heiduschka and Kaufmann, Ztschr. Unters. Nahr. u. Genussm. 1911, v. 21, pp. 375–378.

Klein, Fred, presents a method for the rapid determination of honey.—Pract. Drug. 1911, v. 29, October, p. 37.

Fabris, Ugo, discusses methods for the estimation of water in honey.—*Ztschr. Unters. Nahr. u. Genusssm.* 1911, v. 22, pp. 353–358.

Moreau, Edmond, discusses the identification and estimation of protein substances in honey.—*Ann. falsif.* 1911, v. 4, pp. 36–41.

He also contributes a brief biologic study of honeys.—*Ann. falsif.* 1911, v. 4, p. 65. See also pp. 145–148, and Sartory and Moreau, pp. 259–263.

Hartmann, Wilhelm, discusses the application of Fiehe's reaction in the preliminary examination of honey.—*Ztschr. Unters. Nahr. u. Genusssm.* 1911, v. 21, pp. 374–375.

Feder, E., outlines a method for testing honey for artificial invert sugar.—*Ibid.* v. 22, pp. 412–413.

Mutteleit, F., contributes a brief note on honey and its analysis, with a bibliographic list for the last decade.—*Ann. falsif.* 1911, v. 4, pp. 192–196. See also *Ann. chim. analyt.* 1911, v. 16, pp. 299–305, 344–346.

Verda, A., outlines some novel methods for the analysis of honey.—*Schweiz. Wchnschr. Chem. u. Pharm.* 1911, v. 49, pp. 727–730, 739–742, 755–758.

Utz reviews the reactions for honey published during the years 1909–10.—*Pharm. Prax.* 1911, v. 10, pp. 501–504. See also *Oesterr. Chem.-Ztg.* 1911, v. 14, p. 190.

Witte, H., reviews recent literature relating to the examination of honey.—*Ztschr. Unters. Nahr. u. Genusssm.* 1911, v. 21, pp. 305–374.

Lührig and Scholz present a compilation on some of the literature relating to the determination of the quality of honey by Fiehe's reaction.—*Ibid.* pp. 721–741.

A book review (*Pharm.-Ztg.* 1911, v. 56, p. 233) calls attention to a work on the chemistry of honey by Oskar Haenle.

Voerman and Pakker report the examination of a number of samples of genuine honey and present their results in the form of a table showing the origin of the honey, the specific gravity, the polarization, and a number of other chemical and physical factors that were determined.—*Chem. Weekblad*, 1911, v. 8, pp. 784–790. See also *Ztschr. öffentl. Chem.* 1911, v. 17, pp. 461–467.

Additional references on the chemistry of honey will be found in *Chem. Abstr.*, *Exper. Sta. Rec.*; *Ann. Falsif.*; and *Ztschr. Unters. Nahr. u. Genusssm.*

Notice of Judgment, Number 1123, under the food and drugs act, deals with the adulteration and misbranding of honey.

The Biennial Report of the Inspection of Pharmacies, 1909–10, states that the solution of honey in double its weight of water has not always the desired density, and samples are encountered which are fermented. Factitious honeys are also found made from invert sugar.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 230, and *J. Pharm. Anvers*, 1911, v. 67, p. 518.

An unsigned article (Am. Druggist, 1911, v. 58, p. 138) points out that the *mel depuratum* of the Ph. Germ. V is made by dissolving the honey in water and clarifying by means of kaolin; the filtrate is subsequently evaporated on the water bath.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 654) states that the specific gravity of clarified honey is given as 1.34 instead of 1.33; the ash limit is omitted.

The Committee of Reference in Pharmacy (Third Report, p. 9) suggests that the specific gravity of *mel depuratum* should be adjusted to 1.36 by the addition of water if necessary, but no other tests or characters should be given; these should be included in a monograph for honey. See also Pharm. J. 1911, v. 87, p. 591.

An unsigned review of volume 1 of Ernest J. Parry's work on food and drugs (Brit. & Col. Drug. 1911, v. 60, p. 471) points out that honey is an article which is employed largely in pharmacy, besides its huge consumption as a food, and it is fast becoming a very difficult matter to settle whether honeys are perfectly genuine.

An unsigned article discusses the source and the use of honey in confectionery.—Western Druggist, 1911, v. 33, p. 672.

MENTHA PIPERITA.

Lloyd, John Uri, states that the cultivation of peppermint was extensive in some parts of England as early as 1750, the herb being carried to London for the distillation of the oil.—Bull. Lloyd Libr. 1911, No. 18, pp. 59–60.

Henkel, Alice, describes and illustrates peppermint, *Mentha piperita* L. gives synonyms, other common names, the habitat and range, and some data on the collection, prices, and uses.—Bull. Bur. Plant Ind. U. S. Dept. Agric. 1911, No. 219, p. 28.

Hartwich, C., thinks that the description of *M. piperita* L. as being short stemmed is not applicable as leaves with long stems are frequently observed while the usually short stemmed *M. viridis* may be mistaken for the official plant.—Apoth.-Ztg. 1911, v. 26, p. 14.

Schimmel & Co. (Semi-Annual Report, Apr., 1911, p. 89) state that the large amount of new acreage of 1910 guaranteed an abundance of roots which entered the winter in very good shape.

Mitlacher, Wilhelm, reports some observations on the cultivation of *M. piperita*, and outlines methods for cultivating this drug on a large scale.—Pharm. Post, 1911, v. 44, p. 215.

An editorial (Chem. & Drug. 1911, v. 79, p. 416) commenting on H. Thoms's paper on the cultivation of Japanese peppermint in Germany, notes that the essential oil bearing plants of the *Labiatae* are very capricious and constantly change in character with change of soil and climate.

Henderson, H. John, reports an experiment in peppermint culture, with tabulated statement of the results of his analyses.—Am. Perf.

1911-12, v. 6, p. 158. See also Year-Book of Pharmacy, 1911, pp. 427-430; Pharm. J. 1911, v. 87, p. 175; and Chem. & Drug. 1911, v. 79, p. 216.

Henriksson, J., reports some observations on the cultivation of peppermint and spearmint.—J. Pharm. Elsass-Lothr. 1911, v. 38, pp. 60-61. See also Svensk Farm. Tidskr. 1911, v. 15, pp. 21-25, 41-47.

Camus and Camus, in a contribution to the study of the essential oils and perfume yielding plants, present a botanical study of the cultivated mints and describe and illustrate different varieties of *Mentha piperita*.—Sc. & Ind. Bull. 1911, Oct. pp. 1-35.

Schneider, Albert, states that peppermint and spearmint are closely similar histologically. They may be adulterated with other varieties of mint and spearmint, sand, and dirt, and may be badly cured.—Merck's Rep. 1911, v. 20, p. 2.

Rabak, Frank, gives a tabulated statement of the yield of oil and changes observed in plants at different stages of growth, also of the percentages of esters and of alcohols from fresh and dried plants.—Spatula, 1910-11, v. 17, p. 586.

Muraour, J., presents a brief note on the oil obtained by distillation of the dried leaves of ordinary mint.—Bull. Soc. chim. France, 1911, v. 9, p. 66.

Williams, Ed. E., suggests an improvement in the official process for spirit of peppermint.—Pract. Drug. 1911, v. 29, Apr. p. 56. See also Drug Topics, 1911, v. 26, p. 115.

Notices of Judgment, Nos. 775, 936, and 1126, under the food and drugs act, deal with the adulteration and misbranding of extract of peppermint.

Table showing some of the analytical results reported for spirit of peppermint.

Reporters.	Number of samples		References.
	Examined.	Rejected.	
Dunlap, Renick W.....	13	11	Rep. Ohio Dairy & Food Com. 1910-11, p. 48.
Howard, Charles D.....	2	1	New Hampshire San. Bull. 1911, v. 3, p. 253.
Do.....	14	6	<i>Ibid.</i> p. 282.
Mass. State Bd. Health.....	2	2	Monthly Bull. 1911, pp. 11-12.
Sayre, L. E.....	9	6	Bull. Kansas Bd. Health, 1911, v. 7, p. 141.
Street, John Phillips.....	4	4	Rep. Connecticut Agric. Exper. Sta. for 1909, 1911, p. 581.
Do.....	13	6	<i>Ibid.</i> pp. 507-508.

Hiltner, R. S., in the referee report on flavoring extracts, outlines the methods for the examination of peppermint extracts.—Proc. Assoc. Off. Agric. Chem. 1911, 28th Ann. Conv. p. 142 (Bull. Bur. Chem. U. S. Dept. Agric. 1912, No. 152).

MENTHA VIRIDIS.

Lloyd, John Uri, states that spearmint was cultivated in the convent gardens of the Ninth Century. Its use is largely that of a domestic and popular flavor in confectionery and as a perfume.—Bull. Lloyd Libr. 1911, No. 18, pp. 59–60.

Henkel, Alice, describes and illustrates spearmint, *Mentha spicata* L., also gives synonyms, other common names, the habitat and range, and some data on the collection, prices, and uses.—Bull. Bur. Plant Ind. U. S. Dept. Agric. 1911, No. 219, p. 29.

Camus and Camus, in a contribution to the study of the essential oils and perfume yielding plants, present a botanical study of the cultivated mints and describe and illustrate different varieties of *M. viridis*.—Sc. & Ind. Bull. 1911, Oct. pp. 1–33.

Mitlacher, Wilhelm; reports some experiments in the cultivation of *M. crispata*, and expresses the belief that this drug can readily be grown in Austria.—Pharm. Post, 1911, v. 44, p. 215.

Henriksson, J., reports some observations on the cultivation of peppermint and spearmint.—J. Pharm. Elsass-Lothr. 1911, v. 38, pp. 60–61. See also Svensk. Farm. Tidskr. 1911, v. 15, pp. 21–25, 41–47.

MENTHOL.

The Chemist and Druggist (1911, v. 78, p. 369) states that the Japanese exports of menthol amounted to 55,406 kin in 1908, 102,411 in 1909, and 116,922 in 1910. See also *Ibid.* v. 79, pp. 646, 680, and Schimmel & Co. (Semi-Annual Report, Apr., 1911, p. 137).

An editorial (Oil, Paint, and Drug Reporter, 1911, v. 80, Oct. 16, p. 7) states that menthol is frequently referred to as the "football of the drug trade," and that recent developments have rendered this characterization all the more appropriate. See also *Ibid.* v. 79, Feb. 13, p. 7.

Düsterbehn, F., points out that the Ph. Germ. V now gives the melting point of menthol as 44°.—Apoth.-Ztg. 1911, v. 26, p. 225. See also Pharm. J. 1911, v. 86, p. 581, and Chem. & Drug. 1911, v. 78, p. 47.

Schimmel & Co. (Semi-Annual Report, Apr., 1911, p. 128), in discussing the Ph. Germ. V requirements for menthol, point out that this substance melts between 43.5° and 44.5°. See also comments on Ph. Russ. VI, p. 132.

The Committee of Reference in Pharmacy (Third Report, p. 9) suggests that in the description for menthol, the words "more or less moist from adhering oil" should be omitted. The melting point should be stated as from 42° to 43°, and the odor and taste as "recalling peppermint." See also Pharm. J. 1911, v. 87, p. 591.

Parry, Ernest J., thinks that it would be better to have fixed 44° as the melting point for menthol.—Chem. & Drug. 1911, v. 79, p. 450. See also p. 523.

Hill and Umney, commenting on Parry's article, state that commercial menthol of high purity melts at 43° (or lower).—*Ibid.* p. 492.

Murat, M., discusses the synthesis of the homologues of menthol.—J. Pharm. et Chim. 1911, v. 4, pp. 294–299.

Thoms, H., reports some experiments on the production of menthol in Germany and in the German colonies. He also reports examining a sample of oil of peppermint from German West Africa.—Apoth.-Ztg. 1911, v. 26, pp. 686–687.

Outis presents a discussion on menthol, its dangers, and its rational employment.—Bull. sc. pharmacol. 1911, v. 18, Annexes, pp. 86–91.

Robinson, Leonard, contributes a note concerning the treatment of tuberculosis by "radio-active iodine and menthol," and reports 3 cases.—Brit. M. J. 1911, v. 2, p. 66. See also editorials, pp. 89, 292.

Robinson, Beverley, states that locally, to subdue pain where the skin is intact, lanolin, menthol, and methyl salicylate combined, and covered with absorbent cotton and a gauze bandage, are invaluable.—Critic and Guide, 1911, v. 14, p. 339.

Baer, Jacob M., suggests the use of an aqueous solution of menthol as an acceptable vehicle for gargles, sprays, etc.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 31.

METHYLIS SALICYLAS.

Schimmel & Co. (Semi-Annual Report, Oct., 1911, p. 110) express regret that methyl salicylate was not included in the Ph. Germ. V, and point out that the product is suitable both for internal administration and for external use. It represents the pure ester and is much cheaper than natural wintergreen oil.

Stanislaus and Semmel outline a test to distinguish between oil of gaultheria, oil of betula, and methyl salicylate.—Proc. Pennsylvania Pharm. Assoc. 1911, pp. 245–247.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 78), from published data and their own experience, suggest the following limitation of the constants for methyl salicylate: specific gravity (15/15°), 1.185 to 1.190; optical rotation (20° to 25°), 0°; refractive index (20°), 1.5355 to 1.5375; soluble in 5 to 8 volumes of 70 per cent alcohol; saponification value, 371.5 to 375; boiling point, 222°. See also p. 51.

Robinson, Beverley, states that locally, to subdue pain where the skin is intact, lanolin, menthol, and methyl salicylate combined, and covered with absorbent cotton and a gauze bandage, are invaluable.—Critic and Guide, 1911, v. 14, p. 339.

METHYLTHIONINÆ HYDROCHLORIDUM.

Bernegau, L. H., reports that of 5 lots of methylene blue examined, 2 were strictly U. S. P., while 3 slightly exceeded the U. S. P. limit of 0.008 gm. residue from 2 gm., leaving respectively 0.010, 0.013, and 0.0128 gm. The last contained very small traces of zinc, iron, and arsenic.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 125.

Thomas, B. A., discusses the possible use of methylene blue for determining functional kidney sufficiency.—*Therap. Gaz.* 1911, v. 35, p. 82.

Verbrycke, J. Russell, reports observations on the methylene blue test in the urine of cancer patients.—*Med. Rec.* 1911, v. 80, p. 876.

Palladin, Hübbenet, and Korsakow report observations on the action of methylene blue on the respiration and the alcoholic fermentation of living and of killed plants.—*Biochem. Ztschr.* 1911, v. 35, pp. 1-17.

Tachau, Hermann, reports that patients taking methylene blue have distinctly blue perspiration, sufficient to color the clothing worn by them.—*Arch. exper. Path. u. Pharmacol.* 1911, v. 66, p. 343.

"A. C. K." asserts that the internal administration of even one-half grain of methylene blue will color the urine intensely green after three hours. The color persists for about 24 hours. With one grain the color persists for 48 hours. He proposes a test by which the presence of methylene blue in the urine may be recognized.—*Pract. Drug.* 1911, v. 29, Apr., p. 43.

MEZEREUM.

Lloyd, John Uri, states that *Daphne mezereum* was familiar to persons conversant with domestic medicine in mediæval English times, being employed by the herbalists, and also somewhat by the medical profession of that day.—*Bull. Lloyd Libr.* 1911, No. 18, p. 60.

Fornias, Eduardo, states that *mezereum* is essentially a remedy for the severe neuralgic pain following the disappearance of the rash of *zona*, particularly in the aged.—*Hahnemann. Month.* 1911, v. 46, p. 238.

MISTURÆ.**MISTURA CHLOROFORMI ET CANNABIS INDICÆ COMPOSITA N. F.**

An editorial note (*Chem. & Drug.* 1911, v. 78, p. 289) quotes the report of the Registrar-General to the effect that in 1908 there were 8 poisonings from chlorodyne by negligence or accident, and 4 suicides, as compared with 10 and 6, respectively, for 1909.

MISTURA CRETÆ.

The Committee of Reference in Pharmacy (Third Report, p. 9) suggests that the substitution of acacia for the tragacanth now official is not advisable, owing to the liability of the deposit to cake.

Hommell, P. E., comments on the chalk mixture of the U. S. P., and expresses the belief that compound chalk powder should be removed from the U. S. P. and the mixture improved by using glycerin in place of sugar.—Merck's Rep. 1911, v. 20, p. 46.

MISTURA FERREI COMPOSITA.

Hommell, P. E., thinks that, of the preparations of iron which deserve dismissal from the U. S. P., the compound iron mixture should be among the first to go.—Proc. New Jersey Pharm. Assoc. 1911, p. 85. Also Pract. Drug. 1911, v. 29, July, 229.

Davies, John J., overcomes the instability of Griffith's mixture by making up a supply of the preparation, omitting the iron, and at the time of dispensing adding in the prescribed quantity the necessary amount of ferrous sulphate.—Drug. Circ. 1911, v. 55, p. 568.

The Committee of Reference in Pharmacy (Third Report, p. 9) suggests that 6 gm. of powdered acacia should be added to the compound iron mixture, as the myrrh, when triturated with this, is less liable to cake; the emulsion should be made up to volume and the finely powdered ferrous sulphate dissolved in it by shaking. See also Pharm. J. 1911, v. 87, p. 591.

MISTURA GUAIACI N. F.

The Committee of Reference in Pharmacy (Third Report, p. 10) states that the substitution of the tincture of guaiacum for guaiacum resin is not advisable, owing to the liability of the tincture to change.

MISTURA RHEI ET SODÆ.

Grazer, Fred A., expresses the belief that the official mixture of rhubarb and soda should be a filtered preparation.—Merck's Rep. 1911, v. 20, p. 312.

MORPHINA.

Lloyd, Gordon, states that morphine was discovered in 1804 at Paderborn, Germany, by the obscure drug clerk, Sertürner.—Rocky Mountain Druggist, 1911, v. 25, Mar., p. 43.

The Paris Correspondent (Chem. & Drug. 1911, v. 79, p. 5) reports that the Minister of Commerce has ascertained that there is no maker of salts of morphine in France, it being imported principally from England, but also from Germany.

The Chemist and Druggist (1911, v. 78, p. 369) states that the Japanese imports of morphine salts amounted to 41,113 ounces in 1908, 17,899 in 1909, and 22,194 in 1910.

Heinrici, Walter, in German patent No. 232126, outlines a method for materially increasing the yield of the alkaloids obtained from opium.—Pharm. Ztg. 1911, v. 56, p. 375.

Wieland and Kappelmeier discuss the structural characteristics of morphine and some of its derivatives.—*Ann. Chem.* 1911, v. 382, pp. 306–339.

Pschorr and Knöffler, in a further contribution on the constitution of morphine alkaloids, discuss the constitution of morphothebaine and the synthesis of tetramethoxyphenanthrene.—*Ibid.* pp. 50–61.

Denigès, Georges, presents a note on the preparation of pseudo-morphine by mineral catalysis.—*Bull. Soc. chim. France*, 1911, v. 9, p. 264.

Fabinyi, R., discusses the colorimetric estimation of morphine and colchicine.—*Chem. Ztg.* 1911, v. 35, p. 1909. Also *Pharm. Post*, 1911, v. 44, p. 836.

Gottlieb and Steppuhn discuss the quantitative estimation of morphine according to the method proposed by Rübsamen by shaking out with chloroform.—*Arch. exper. Path. u. Pharmacol.* 1910–11, v. 64, pp. 54–66.

Thorburn, A. D., reports observations on the estimation of morphine by extraction with phenylethyl alcohol.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 754–756.

Wiley, H. W., reports that methods for the estimation of morphine salts in preparations have been made a special study and the results have been published in Bureau of Chemistry Bulletin No. 137.—*Ann. Rep. U. S. Dept. Agric.* 1911–12, p. 435.

Eaton, E. O., outlines a method for estimating small quantities of morphine in mixtures. He also reports the comments offered by a number of analysts.—*Proc. Assoc. Off. Agric. Chem.* 1911, 28th Ann. Conv., pp. 243–244 (*Bull. Bur. Chem. U. S. Dept. Agric.* 1912, No. 152).

Thomlinson, J. C., suggests a potassium permanganate coefficient for estimating morphine, the result of experimental determination by a method outlined.—*Pharm. J.* 1911, v. 86, p. 643.

Kahn, Joseph, in a paper on organic synthesis, discusses the relations of morphine and its derivatives; he also calls attention to some new reactions for morphine.—*Proc. New York Pharm. Assoc.* 1911, p. 64–66.

An editorial (*Drug. Circ.* 1911, v. 55, pp. 71–74) calls attention to and reproduces a brief of the evidence given at a hearing before the Committee on Ways and Means of the National House of Representatives on certain bills introduced for the purpose of restricting the sale of opium and other narcotics.

Koch, Christopher, describing the Pennsylvania cocaine and morphine crusade, asserts that in the United States we import 400,000 pounds of opium annually; 80 per cent of this is manufactured into morphine and 75 per cent of this morphine is consumed by the fiend.—*Midl. Drug.* 1911, v. 45, pp. 211–216.

An editorial note (*Drug. Circ.* 1911, v. 55, p. 123) states that doping candy with morphine is pretty near the limit, and calls attention to a formula for cough lozenges containing morphine, reproduced in a confectionery journal.

An editorial (*Pharm. J.* 1911, v. 87, p. 807) states that the illicit traffic in morphine and cocaine in India, China, and other Far Eastern countries is said to be becoming an evil worse than opium smoking, certain to increase as restrictions become more stringent. The British Government urges concerted action of the Powers. See also *Chem. & Drug.* 1911, v. 79, p. 804.

Bell, F. McKelvey, discusses morphinism and morphinomania. He outlines his treatment and utters a word of caution as to hyoscine hydrobromide.—*N. York M. J.* 1911, v. 93, pp. 680–682.

Richter, R., warns against the frequently suggested treatment of the morphine habit by the use of cocaine.—*Pharm. Ztg.* 1911, v. 56, p. 198.

An editorial (*Drug Topics*, 1911, v. 26, p. 66) calls attention to the proposed use of unsweetened chocolate in the treatment of the morphine habit. See also *Western Druggist*, 1911, v. 33, p. 98.

v. Radesky, C. W. R., discusses the treatment of the morphine habit, as practiced by him. He recommends the use of dionin and of veronal sodium as substitutes for the morphine.—*Merck's Arch.* 1911, v. 13, pp. 377–380.

Cabot, Richard C., presents a note on the Towns-Lambert treatment for morphinism and alcoholism, with a report of 10 cases.—*Boston M. & S. J.* 1911, v. 164, p. 676.

Pouchet presents to the French Academy, Oscar Jennings' method of treatment of morphinomania.—*Répert. pharm.* 1911, v. 23, p. 184.

Donald, John G., criticizes H. Crichton Miller's discussion of the treatment of morphinomania [*Hyg. Lab. Bull.* 84, p. 542].—*Brit. M. J.* 1911, v. 1, p. 401. See also page 595.

An editorial (*Critic and Guide*, 1911, v. 14, pp. 108–109) expresses the belief that the gradual withdrawal while keeping the patient "completely at rest is the best method of treating morphinism.

Ladd, E. F., presents a list of "baby killers," often referred to as soothing syrups, which were found to contain morphine, codeine, or heroin.—*North Dakota Pharm. Assoc.* 1911, p. 65.

Mason, Nathaniel B., reports a case of the administration of one-eighth of a grain of morphine to a baby two and one-half days old. Recovery.—*Boston M. & S. J.* 1911, v. 164, p. 190.

An editorial (*New Idea*, 1911, v. 33, pp. 33–34) states that an eminent physician recently made the statement that if he were compelled to confine himself to the use of a single remedy for the relief of human suffering he would choose morphine, and if this were denied him he would select acetanilide.

Ranson and Scott, discussing the results of medicinal treatment in 1,106 cases of delirium tremens, state that morphine and opium are both useless and dangerous. In the delirious patients it increased the mortality more than chloral, paraldehyde, or the bromides, and in the incipient cases it had little if any effect in warding off the stage of delirium.—*Am. J. M. Sc.* 1911, 4, v. 141, pp. 673-687.

Bevan, Arthur Dean, concludes that the use of morphine and scopolamine (hyoscine) before a general anæsthetic brings with it dangers which are not compensated for by any advantages, and the method should be abandoned or limited to specially selected cases.—*J. Am. M. Assoc.* 1911, v. 57, pp. 1821-1824.

Gatch, W. D., asserts that morphine, or any drug which depresses the respiration, retards the elimination of ether or chloroform.—*Ibid.*, p. 1599.

Herb, Isabella C., protests against the routine giving of drugs before anæsthesia. She considers the use of morphine with atropine or with hyoscine (scopolamine) in combination with ether or chloroform absolutely detrimental in many instances.—*Ibid.*, v. 56, pp. 1312-1315.

Prinz, Hermann, points out that morphine has no anæsthetic or narcotic effect upon the sensory nerve endings.—*Dental Cosmos*, 1911, v. 53, p. 1375.

Dixon, W. E., states that the seat of action of morphine is on the sensory cells in the brain; the local application of morphine in all cases is based on fallacy and is useless.—*Pharm. J.* 1911, v. 87, p. 15.

Häne, Joh. Rud., reports observations on intensifying the narcotic action of morphine by means of scopolamine.—*Therap. Gegenw.* 1911, v. 52, p. 64.

An editorial (*Therap. Gaz.* 1911, v. 35, pp. 630-631), in discussing the use of sedative drugs in surgical anæsthesia, expresses the belief that the use of morphine and scopolamine for the purpose of producing surgical anæsthesia is now recognized as having an exceedingly limited range of usefulness.

Guisseppi, P. L., discusses hyoscine-morphine anæsthesia in obstetric medicine and points out that its object is not to produce complete unconsciousness, but to produce twilight sleep.—*Practitioner*, 1911, v. 87, pp. 84-95.

An editorial (*Therap. Gaz.* 1911, v. 35, p. 791) reviews the present status of morphine-scopolamine anæsthesia, and points out that every anæsthesia offers a certain direct or indirect danger to life.

A number of additional references on the morphine habit and on the uses of morphine will be found in *Index Med.*; *J. Am. M. Assoc.* Additional references on the chemistry of morphine and related compounds will be found in *Chem. Abstr.*, and *Chem. Centralbl.*

ETHYLMORPHINE HYDROCHLORIDE.

Schneider, A., discusses the chemistry of ethylmorphine and points out that the Ph. Germ. V requires that the hydrochloride be soluble in 12 parts of water and in 25 parts of alcohol.—Pharm. Zentralh. 1911, v. 52, pp. 344–345. See also Düsterbehn, F., Apoth.-Ztg. 1911, v. 26, p. 135; and Pharm. J. 1911, v. 86, p. 497.

Brav, Aaron, comments on the therapeutic value of dionin in the treatment of ocular diseases.—Merck's Arch. 1911, v. 13, pp. 174–176.

An unsigned article (Fol. Therap. 1911, v. 5, p. 19) discusses the nature and composition of dionin and points out that it is closely allied in pharmacological action to codeine.

An editorial (Pharm. Ztg. 1911, v. 56, p. 572) points out that the Ph. Germ. V includes dionin as a synonym for æthylmorphinum hydrochloricum.

Kobert is reported as stating that while dionin is less toxic than heroin it is still 3 times as poisonous as codeine.—Pharm. Ztg. 1911, v. 56, p. 381.

Riedel's Berichte (1911, pp. 66–67) quotes Reif, who has used dionin as a substitute for morphine and found it to be practically free from secondary actions.

MORPHINÆ HYDROCHLORIDUM.

An unsigned review (Chem. & Drug. 1911, v. 78, p. 47) states that the Ph. Germ. V provides that morphine hydrochloride on drying at 100° should lose not more than 14.4 per cent of its weight. If morphine acetate is prescribed for subcutaneous injections, morphine hydrochloride must be dispensed in its place. See also Düsterbehn, F., Apoth.-Ztg. 1912, v. 26, p. 225.

The Committee of Reference in Pharmacy (Third Report, p. 10) states that the solubility in cold water should be corrected to 1 in 25, and that in alcohol to 1 in 69 of alcohol (90 per cent). In the precipitation test the salt should be dissolved in 50 cc. of warm morphinated water; the precipitated morphine should weigh from 1.5 to 1.51 gm. See also Pharm. J. 1911, v. 87, p. 591.

MOSCHUS.

Lloyd, John Uri, states that musk was known to Aëtius, who lived about the middle of the Sixth Century A. D. The use of musk as a perfume antedates European record, but its introduction as a stimulant has no record of its origin.—Bull. Lloyd Libr. 1911, No. 18, pp. 60–61.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Oct., p. 74) report that the exportation of musk has been less than in previous years, though the export statistics are not yet to hand. See also *Ibid.* April, p. 75.

Schimmel & Co. (Semi-Annual Report, October, 1911, p. 113) present a table showing the exports of musk from Shanghai in the first six months of 1911. See also *Ibid.* Apr., 1911, p. 137.

Gehe & Co. (Handelsbericht, 1911, pp. 87-88) present a table showing the destination of the musk exported from Shanghai during the years 1906 to 1910, inclusive.

MYRISTICA.

Tunmann, O., states that nutmegs and mace are being produced in a number of tropical countries. The better varieties are usually classed as Banda nuts, though the cheaper nuts from Java and Menado are being extensively used. The chief markets are Amsterdam and Rotterdam, followed by London, New York, and Hamburg.—Apoth.-Ztg. 1911, v. 26, p. 569.

Lloyd, John Uri, states that the nutmeg has been an article of import and export from Aden since the middle of the Twelfth Century, and by the end of that century both nutmeg and mace had reached Northern Europe.—Bull. Lloyd Libr. 1911, No. 18, p. 61.

Harris, William, states that nutmeg was introduced into Jamaica in 1782 and reintroduced by Marter in 1788.—Bull. Dept. Agric. Jamaica, 1911, v. 1, No. 4, p. 248.

Figart, D. Milton, reports exports from the Straits Settlements to the United States during the first quarters of 1910 and 1911 amounting respectively to 87 and 118 long tons of mace and nutmegs.—Cons. & Tr. Rep. June 23, 1911, p. 1310. See also *Ibid.* Dec. 13, p. 1319.

The Committee of Reference in Pharmacy (Third Report, p. 10) suggests a slight modification in the description of nutmegs.

Hartwich, C., in commenting on the Ph. Germ. V description of myristica, thinks that the size of the starch grains might have been indicated.—Apoth.-Ztg. 1911, v. 26, p. 94.

Schneider, Albert, states that much of the ground nutmeg is of very inferior quality (use of small, stunted, and worthless nutmegs, so-called grinding nutmegs).—Merck's Rep. 1911, v. 20, p. 2.

He also reports on 19 samples of nutmeg, 5 of which, or 26.3 per cent, were adulterated with nut shells, corn meal, beans, and curcuma.—Pacific Pharm. 1911, v. 5, p. 177.

Notice of Judgment, No. 1180, under the food and drugs act, deals with the adulteration and misbranding of myristica.

Wilkinson, K. Douglas, reports a case of nutmeg poisoning in a woman of 23, who used it, unsuccessfully, as an abortifacient.—Brit. M. J. 1911, v. 1, p. 993.

See also Bartlett, Bertram F., *Ibid.* v. 2, p. 269.

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MYRRHA.

Lloyd, John Uri, states that myrrh has been a constituent of incense, perfume, and such, in ceremonial religious life, as well as an article employed by the common people from the days of the most remote antiquity.—Bull. Lloyd Libr. 1911, No. 18, p. 61. See also Spatula, 1910-11, v. 17, p. 407.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Apr., p. 81) state that the myrrh of the Somalis is derived from the *Commiphora myrrha* Ehr. and Nees, and is called by the natives *Molmol*; it is very closely allied to the *Heerabol*, if not identical with it. Arabian myrrh, or genuine myrrh, has an origin still slightly doubtful, and two sorts of it are known: Fadhli myrrh and the myrrh of Zemen, a little different in appearance and derived from different districts. The plants producing them are *Commiphorae*, probably *C. myrrha* and *C. opobalsamum*. The Balsam of Mecca or Gilead, at the present day almost unobtainable, is a variety of myrrh.

Hartwich, C., in discussing the Ph. Germ. V, expresses the belief that the statement that myrrh is derived from several species of *Commiphora* is not fully established, and there is still the possibility that the drug is derived from but one species, *C. abyssinica*.—Apoth.-Ztg. 1911, v. 26, p. 34.

See also Pharm. J. 1911, v. 86, p. 654.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 44-45), in discussing the Ph. Germ. V requirements for myrrh, state that the limitation of 7 per cent ash and 65 per cent of matter insoluble in alcohol is complied with only by the better qualities of this drug.

The Committee of Reference in Pharmacy (Third Report, p. 10) proposes limits for matter insoluble in alcohol (70 per cent) and for ash (5 per cent). Details are given for an improved nitric acid test. See also Pharm. J. 1911, v. 87, p. 591.

Parry, Ernest J., gives values for 6 samples of genuine myrrh examined.—Chem. & Drug. 1911, v. 78, p. 379.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 15) report that the ash obtained from 13 samples of myrrh ranged from 3.24 to 9.28 per cent, with an average of 4.69 per cent.

Schneider, Albert, reports on two samples of myrrh, one of which was adulterated.—Pacific Pharm. 1911, v. 5, p. 178.

van Itallie, E. I., reports on 5 samples of myrrh which were found to contain from 49.7 to 67.9 per cent of material insoluble in alcohol and from 3.4 to 4.75 per cent of ash.—Pharm. Weekblad, 1911, v. 48, p. 283.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that myrrh is mixed with stones and gums completely insoluble in alcohol.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 230, and J. Pharm. Anvers, 1911, v. 67, p. 519.

Brunker, J. E., reports that, of 7 samples of tincture of myrrh examined, the average extractive was 5.1 gm. in 100 mils; alcohol by volume, 83.5 per cent.—*Brit. & Col. Drug.* 1911, v. 60, p. 229.

Jaffa, M. E., reports 2 samples of tincture of myrrh mislabeled.—*Bull. California Bd. Health*, 1911, v. 6, p. 491.

NAPHTHALENUM.

Thomlinson, J. C., asserts that naphthalene and its congeners, apart from any disinfectant action essential to their chemical constitution in evaporating in the air, possibly act as ozonizers, the liberation of nascent oxygen in the decomposition of the ozone acting as an oxidizing agent, in a similar way to that of hydrogen peroxide.—*Pharm. J.* 1911, v. 87, pp. 26–27.

Prochownick reports a fatal case of poisoning from naphthalene.—*Therap. Monatsh.* 1911, v. 25, pp. 489–490.

NITROUS OXIDE.

The Council on Pharmacy and Chemistry of the A. M. A. reports the examination of liquid nitrous oxide, and outlines tests for the product.—*Rep. Council. Pharm. & Chem.* 1911, pp. 20–22.

Smith and Leman, discussing the purity of nitrous oxide, give tabulated statements of the results of their examination of a number of commercial products.—*J. Am. M. Assoc.* 1911, v. 57, p. 577.

Baskerville and Stevenson, in a contribution to the chemistry of anæsthetics, review the bibliography of nitrous oxide and report on the chemical examination of compressed nitrous oxide as supplied by American manufacturers. They recommend that nitrous oxide which is to be used for anæsthetic purposes should contain at least 95 per cent of N_2O , and no solids, liquids, combustible organic matter, chlorine, or other oxides of nitrogen.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 579–582.

See also *J. Frankl. Inst.* 1911, v. 172, pp. 115–117.

Harbert, J. P., considers nitrous oxide the most pleasant and safest general anæsthetic we now possess. He asserts that in 750,000 administrations but one death has been reported; none where nitrous oxide and oxygen have been administered in combination.—*Eclectic M. J.* 1911, v. 71, pp. 30–32.

Warner, Norman S. Heegaard, describes and illustrates a new method of administering nitrous oxide, with or without oxygen, for prolonged dental operations.—*Lancet*, 1911, v. 180, p. 371.

Kearney, H. W., presents a consideration of nitrous oxide with oxygen as an anæsthetic in general surgery, with a review of the more recent literature.—*N. York M. J.* 1911, v. 94, pp. 1157–1163.

Teter, Charles K., discusses the use of nitrous oxide and oxygen for the production of anæsthesia and analgesia in dental operations.—*Dental Cosmos*, 1911, v. 53, pp. 37–43.

Manne, William, in commenting on the paper by Teter, maintains that the proper administration of mixed gases depends on fully expanding the gases by heating to about 60° F.—*Ibid.* p. 206.

Mandell, A. H., discusses nitrous oxide and oxygen anæsthesia, and points out that nitrous oxide is much more difficult to administer than is ether.—Boston M. & S. J. 1911, v. 165, pp. 591–592.

Bevan, Arthur Dean, concludes that nitrous oxide is the anæsthetic of choice for short operations, manipulations, and examination. It is also the anæsthetic of choice in operations on patients with seriously impaired kidneys, and often in cases of extremely bad condition, as typhoid perforations, general peritonitis, etc. It should not be employed in patients with bad hearts. It is not so satisfactory an anæsthetic as ether, and it should not be employed in preference to ether in patients who are good surgical risks.—J. Am. M. Assoc. 1911, v. 57, pp. 1821–1824.

The editor of the "Therapeutics" column notes that the administration of nitrous oxide gas as a preliminary to the administration of ether does not meet the approval of the most careful surgeons.—*Ibid.* v. 57, p. 1997.

A number of additional references on the use of nitrous oxide as an anæsthetic will be found in Index Med., and J. Am. M. Assoc.

NUX VOMICA.

Lloyd, John Uri, states that nux vomica is thought to have been introduced into medicine by the Arabians; the natives of India did not, however value it, probably because of its exceedingly energetic nature.—Bull. Lloyd Libr. 1911, No. 18, p. 61.

The Pharmaceutical Journal (1911, v. 87, p. 460) calls attention to the paper by A. W. Hill (Kew Bull.) on *Strychnos ignatii* and other East Indian and Philippine species of *Strychnos*. See also Chem. & Drug. 1911, v. 79, p. 480.

Magelessen, W. C., reports that the tree producing nux vomica grows in abundance in the jungle districts of Ceylon. The tree is not cultivated, and the seed is gathered by natives on their own account and sold to the Moorish traders, who in turn sell to Colombo exporters.—Oil, Paint, and Drug Reporter, 1911, v. 80, Nov. 6, p. 40.

Tunmann, O., states that the chief markets for nux vomica are China and America, the smaller quantities going to London. The importations into Hamburg are very irregular.—Apoth.-Ztg. 1911, v. 26, p. 580.

Joblin, Miller, notes that in the fiscal year 1909 there were imported into the United States 1,666,957 pounds of nux vomica; in 1910, 2,738,662 pounds.—Cons. & Tr. Rep. Oct. 20, 1911, p. 350.

Rosenthaler, L., points out that the Ph. Germ. V restricts the ash content of nux vomica to 3 per cent. The total alkaloid constant

remaining as before—2.5 per cent.—Pharm. Zentralh. 1911, v. 52, p. 34.

See also Pharm. J. 1911, v. 86, p. 708.

Schneider, Albert, states that nux vomica may be adulterated with Ignatia beans and vegetable ivory, which is not very likely. Very frequently there is an excess of trichomes and the presence of abundant blackened seeds. Other adulterants are very readily detected.—Merck's Rep. 1911, v. 20, p. 2.

See also Pacific Pharm. 1911, v. 5, p. 179.

Rusby, H. H., reports having seen a lot of many tons of nux vomica seeds which had been rolled in clay until they bore a coating, which probably increased their weight by at least 50 per cent.—Proc. Vermont Pharm. Assoc. 1911, p. 79-91.

Leuchs and others present contributions on the strychnos alkaloids.—Ber. deutsch. chem. Gesellsch. 1911, v. 44, pp. 3040-3049, 3049-3051; also 2136-2145.

Schmidt, Ernst, reports some observations on the polysulphhydrates of brucine.—Apoth.-Ztg. 1911, v. 26, pp. 701-702.

Linke, H., reports finding 1.7 per cent of ash and 9.4 per cent of moisture in nux vomica; the Ph. Germ. V permits 3 per cent of ash. He also asserts that the assay of nux vomica, according to the Ph. Germ. V method is complicated, and that the newer Fromme method is much to be preferred.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 195-196.

Hartwich, C., in commenting on the Ph. Germ. V description for nux vomica, points out that the estimation of alkaloid has been modified so as to provide for the purification of the alkaloid before titration.—Apoth.-Ztg. 1911, v. 26, p. 94.

Dohme and Engelhardt think that Keller's aliquot part method for nux vomica and its preparations gives fairly good results. It must be admitted, however, that the results obtained by using the U. S. P. menstruum are somewhat higher.—Am. J. Pharm. 1911, v. 83, p. 523.

Kimberly, C. H., reports the opinion that the oxidation of the brucine in the nux vomica assay is facilitated by gently warming the solution before the addition of the nitric acid. An approximate temperature for the oxidation should be specified, but the addition of 1 cc. of a 5 per cent solution of sodium nitrite gives an immediate oxidation.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 160.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 52) report the comparative results of the gravimetric and volumetric assay of a sample of nux vomica. They conclude that the figures confirm the accuracy for general use of the Ph. Germ. V volumetric equivalent.

Dawson, E. S., asserts that iodeosin is a rather unsatisfactory indicator, as the tinge of color at the end reading is so very faint.

If an indicator could be employed that would yield a more distinctive tinge of color, it would render the assay very satisfactory.—Proc. New York Pharm. Assoc. 1911, p. 93.

Herzog, J., calls renewed attention to a source of error in the determination of the alkaloid content of *nux vomica*. He points out that the fatty oil of this drug is saponified to some extent by the alkali used in the shaking out of the alkaloid, and the resulting soap subsequently occurs as a contamination of the alkaloid.—Ber. pharm. Gesellsch. 1911, v. 21, p. 204.

See also Roderfield, A., *Apoth.-Ztg.* 1911, v. 26, p. 272.

Caesar & Loretz (*Jahres-Bericht*, 1911, pp. 139-140) discuss the valuation of *nux vomica* and present a table showing the alkaloid requirements and the limitations for ash included in several pharmacopœias.

Noyes, C. R., reports the assay of 7 samples of *nux vomica*, yielding from 1.264 to 1.527 per cent strychnine.—Proc. Minnesota Pharm. Assoc. 1911, p. 75.

Smith, Kline & French Co. (Analytical Report, 1911, p. 28) reports that 5 samples of *nux vomica* were found to have a strychnine content of from 0.86 to 0.16 per cent.

Vanderkleed, Chas. E., reports 22 assays of *nux vomica*; lowest 1.060 per cent, highest 1.849 per cent strychnine; 13 above and 9 below standard.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

Evans Sons Leacher & Webb (Analytical Notes, 1911, 1912, p. 53) report on a sample of extract of *nux vomica* which assayed gravimetrically 17 per cent and volumetrically 14.3 per cent of total alkaloids, and gravimetrically 9 per cent and volumetrically 8.3 per cent of strychnine. They point out that the strychnine was practically free from brucine, and that it probably existed in the preparation in the ratio of 5:4.

An unsigned article (*Am. Druggist*, 1911, v. 58, p. 138) states that the extractum strychni of the Ph. Germ. V is required to contain 16 per cent of alkaloids, calculated as strychnine and brucine, with an average molecular weight of 364. See also *Chem. & Drug.* 1911, v. 78, p. 632.

Bachman, Gustav, reports that the sample of extract of *nux vomica* analyzed by him assayed 5.32 per cent of strychnine.—Proc. Minnesota Pharm. Assoc. 1911, p. 102.

Smith, Kline & French Co. (Analytical Report, 1911, p. 21) reports that 4 samples of extract of *nux vomica* were assayed and found to contain from 6.05 to 8.1 per cent of strychnine.

Cowley, R. C., states that commercial liquid extracts of *nux vomica* are at times met with, of a very dark color, almost black, giving evidence of caramelization both by color and odor.—*Chem. & Drug. Australas.* 1911, v. 26, p. 199.

Bachman, Gustav, reports that the sample of fluid extract of nux vomica analyzed by him contained 1.06 gm. of strychnine.—Proc. Minnesota Pharm. Assoc. 1911, p. 102.

Smith, Kline & French Co. (Analytical Report, 1911, p. 24) reports that 4 samples of fluid extract of nux vomica contained from 0.724 to 1.195 gm. strychnine in 100 cc.

Sayre, L. E., points out that a tincture of nux vomica made from the fluid extract will not have the same physical properties as that made from the extract as directed by the U. S. P.—Bull. Kansas Bd. Health, 1911, v. 7, p. 139.

The Committee of Reference in Pharmacy (Third Report, Suppl., p. 4), in view of the fact that strychnine is far more toxic than brucine, recommends that tincture of nux vomica be standardized in terms of strychnine and not in terms of total alkaloid as required by the International Agreement. See also Pharm. J. 1911, v. 87, p. 847.

Diekman, George C., endorses the recommendation to make tincture of nux vomica directly from the drug, and points out that the preparation obtained from the use of extract yields tinctures of all colors and appearances.—Proc. New York Pharm. Assoc. 1911, p. 81.

An unsigned article (Drug. Circ. 1911, v. 55, p. 251) discusses the making of tincture of nux vomica and reviews some of the recent history of this preparation.

Wetterstroem, Theodore D., states that an examination of the tinctures of nux vomica on the market shows a declared alcohol content all the way from 40 per cent to 75 per cent.—Proc. Ohio Pharm. Assoc. 1911, p. 96.

Brunker, J. E., reports that of 134 samples of tincture of nux vomica examined the average extractive was 2.7 gm. in 100 mls; alcohol by volume, 63.2 per cent; 12 were defective, 11 as to excess of alkaloids, etc., and 1 as to alcohol.—Brit. & Col. Drug. 1911, v. 60, p. 229.

Sayre, L. E., reports that 3 of the 11 samples of tincture of nux vomica examined were not passed.—Bull. Kansas Bd. Health, 1911, v. 7, p. 139.

Havenhill, L. D., reports that in 26 samples of tincture of nux vomica examined the alcoholic strength ranged from 63.1 to 75.15 per cent by volume and the strychnine content from 0.081 to 0.140 gm. per 100 cc. The percentage of tinctures within the 10 per cent limit was 47.—Proc. Kansas Pharm. Assoc. 1911, p. 110.

An unsigned note (J. Am. M. Assoc. 1911, v. 56, p. 1211) on Eighteenth Century materia medica quotes some of the therapy of Herman Boerhaave with reference to nux vomica.

An editorial (Eclectic Med. Glean. 1911, v. 7, p. 139) quotes King as asserting that both nux vomica and its alkaloid, strychnine, are

among the most valuable of remedies having a stimulant action upon the nervous organization. Being stimulants, they frequently prove sedative, in the sense that that term is employed in Eclectic therapeutics; and they also relieve pain.

Jones, Eli G., states that whenever, in conjunction with other symptoms, the patients complain that they are so bloated that their clothing feels too tight for them, you should think of *nux vomica*.—*J. Therap. & Diet.* 1911, v. 5, p. 138.

Heeve, William L., gives *nux vomica* in cases of morning diarrhoea in the neurotic.—*Nat. Eclect. M. Assoc. Quart.* 1910–1911, v. 2, p. 121.

Majumdar, P. C., states that *nux vomica* as a remedy for toothache is suitable for those who lead a sedentary life, often irritable, addicted to coffee and alcohol, and often subject to cold, jerking, shooting pain, tooth seems loose, is hollow.—*Hahnemann. Month.* 1911, v. 46, p. 633.

See also under *Strychnina*.

OLEATA.

Mackay, G. J., advocates the adoption of the process of obtaining pure oleates by the reaction between metallic salts and solution of potassium or sodium oleate.—*Chem. & Drug.* 1911, v. 78, p. 314. See also *Pharm. J.* 1911, v. 86, p. 269; and *Chem. & Drug. Australas.* 1911, v. 26, pp. 60–61.

OLEATUM HYDRARGYRI.

Cowley, R. C., recommends the use of undried soap in making oleate of mercury.—*Chem. & Drug.* 1911, v. 78, p. 20. See also *Chem. & Drug. Australas.* 1911, v. 26, p. 58.

An editorial (*Pharm. J.* 1911, v. 86, p. 129) notes the protest of R. C. Cowley against the proposition to revert to the old process of the *Ph. Brit.* 1885 for the preparation of oleate of mercury.

Mackay, George I., thinks that the instability of the compound as usually prepared has militated to a great extent against its general use.—*Ibid.* p. 269.

Wild, R. B., states that the present precipitated oleate is considerably less active and penetrating than the oleate made by combining mercuric oxide and oleic acid, as in the *Ph. Brit.* 1885.—*Brit. M. J.* 1911, v. 2, p. 162. See also *Pharm. J.* 1911, v. 87, p. 132.

OLEA PINGUA.

The Chemist and Druggist (1911, v. 78, p. 370) gives a brief review of the oil and seed trades and the portals of commerce.

An editorial (*Brit. & Col. Drug.* 1911, v. 59, p. 22) presents a brief review of the conditions and values of certain seed oils for the year 1910.

Bontoux, Emile, discusses the utilization of refrigeration in the production of fats and oils.—*Chem. Ztg.* 1911, v. 35, pp. 61–62, 85–86, 94–95.

Rosenthaler, L., discusses the fatty oils of the Ph. Germ. V.—*Pharm. Zentralh.* 1911, v. 52, pp. 14–15.

Stüwe, W., outlines his modifications of the Ph. Germ. V methods for determining the melting point and for estimating the iodine number of fats and similar substances.—*Apoth.-Ztg.* 1911, v. 26, p. 677.

Heyl, Georg, discusses the Ph. Germ. V method for determining the melting point of fats and oils.—*Ibid.* pp. 444–445.

Siedler, P., discusses the determination of melting points of fats and fatty substances, according to the method outlined in the Ph. Germ. V, and presents a table showing the results obtained by him.—*Pharm. Ztg.* 1911, v. 56, pp. 1002–1003.

Ingenlath describes and illustrates an S-shaped capillary, designed to overcome a deficiency in the Ph. Germ. V method for determining melting points of fats as outlined by P. Siedler.—*Ibid.* p. 1039.

v. Liebermann, L., describes and illustrates an apparatus for estimation of the melting point of fats.—*Ztschr. Unters. Nahr. u. Genussam.* 1911, v. 22, pp. 294–295.

Heyl, Georg, discusses the determination of the iodine number of fats as outlined in the Ph. Germ. V, and presents a compilation of the requirements in the form of a table.—*Apoth.-Ztg.* 1911, v. 26, p. 497.

An editorial (*Am. Druggist*, 1911, v. 58, p. 35) outlines the method of procedure given in the Ph. Germ. V for determining the melting point of fats and similar bodies.

The Committee of Reference in Pharmacy (Third Report, Appendix, p. 36) outlines methods for the determination of the acid, saponification, and iodine values and of unsaponifiable matter. See also *Pharm. J.* 1911, v. 87, p. 847.

Bettink, H. Wefers, presents a table showing the official requirements for the iodine number, acid number, saponification number, and ester number of the fats and fatty oils of the Ph. Germ. V and the Ph. Ndl. IV.—*Pharm. Weekblad*, 1911, v. 48, p. 595.

Moyer, J. L., suggests that the Hanus method of ascertaining the iodine number of oils be specified in place of the Hübl, and that a definite statement be made as to whether the determination of physical constants should be made with samples of chemicals as found in the market or with dried samples.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 29.

Parry, Ernest J., urges that adequate time be specified in the description of the iodine value determination of fatty oils, and gives a number of results showing the variations after different intervals.—*Chem. & Drug.* 1911, v. 79, p. 387. See also pp. 427, 460.

Serger, H., discusses the valuation of fatty oils by means of color reactions.—*Chem. Ztg.* 1911, v. 35, pp. 581-582, 602-603, 610-612.

Campbell and Long discuss the saponification of fats for titer determination.—*J. Ind. & Eng. Chem.* 1911, v. 3, p. 114.

Siegfeld, M., discusses the determination of the Reichert-Meissl number of fatty oils.—*Chem. Ztg.* 1911, v. 35, p. 1292.

Bellmer, E., discusses the determination of the specific gravity of oils. He compares the specific gravity of the oil with that of a mixture of water and alcohol.—*Ibid.* p. 997.

Smith, Kline & French Co. (Analytical Report, 1911, pp. 29-36) reports observations on various fixed oils.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, pp. 80-82) present a table giving the limitation of various constants for fixed oils, fats, and waxes.

Grimme, C. (*Chem. Rev. Fett- u. Harzindustrie*, 1910, 233), presents the physical and chemical constants of some new or little known fixed oils.—*Pharm. Zentralh.* 1911, v. 52, pp. 208-209. See also pp. 328-331, 661-667, and 1141-1149.

Jablokoff discusses the detection of mineral oils in oils.—*Répert. pharm.* 1911, v. 23, p. 532.

Outerbridge, Alexander E., outlines a new method for determining the adulteration of fixed oil by mineral or rosin oils.—*Chem. Eng.* 1911, v. 14, pp. 347-348. See also *Sc. Am. Suppl.* 1911, v. 72, p. 155.

Walker and Boughton report observations on the Outerbridge fluorescence test for mineral and rosin oils. They conclude that fluorescence is not proof of the presence of either of these oils as adulterants.—*Circ. Bur. Chem. U. S. Dept. Agric.* 1911, No. 84, pp. 2. See also *J. Ind. & Eng. Chem.* 1911, v. 3, pp. 816-817.

Loebell, Heinrich, discusses the determination of the acid content of oils and fats, with the particular consideration of lubricating oils of mineral origin.—*Chem. Ztg.* 1911, v. 35, pp. 276-277.

Bodtker, Eyvind, comments on the paper by Loebell on the estimation of free acid in fats according to the methods recognized by German authorities.—*Ibid.* p. 548.

Waters, C. E., reports some observations on the effect of added fatty and other oils upon the carbonization of mineral lubricating oils.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 812-816.

Duperchuis, H., continues his contribution on the analysis of oils.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, pp. 274-277.

Kessler and Mathiason present observations on the interpolation method of oil analysis.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 66-72.

A book review (*Ber. pharm. Gesellsch.* 1911, v. 21, p. 288) calls attention to the volume on the chemistry and analysis of fats by Heiduschka and Pfizenmaier.

An unsigned article (*Oil, Paint and Drug Reporter*, 1911, v. 79, Apr. 24, p. 28J) calls attention to a monograph by Julien L. Brode on

the possibilities of the fixed oil business in connection with the cultivation of peanuts in the south. See also *Ibid.* v. 79, Mar. 20, p. 281.

Tunmann, O., states that the cultivation of *Arachis hypogaea* L. has been introduced into many of the warmer countries of the world, though the west coast of Africa still supplies the greater amount of the seed.—*Apoth.-Ztg.* 1911, v. 26, p. 568.

Rosenthaler, L., points out that the saponification values for peanut oil as given by the Ph. Germ. V do not include the maximum and minimum values that have been observed.—*Pharm. Zentralh.* 1911, v. 52, p. 14.

See also *Pharm. J.* 1911, v. 86, p. 654.

Grout, John H., reports from Odessa, Russia, that the sunflower is grown there to a very considerable extent. The amount of seed crushed there for the extraction of the oil amounts to over half a million tons annually.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 53.

Farrell, Anna, discusses the nature and constituents of the soya bean, sometimes incorrectly called soja bean, *Glycine hispida*.—*Pacific Pharm.* 1911-1912, v. 5, pp. 87-89.

Matthes and Dahle discuss the chemical and physical constants of soya bean oil.—*Arch. Pharm.* 1911, v. 249, pp. 424-444. See also *Chem. Ztg.* 1911, v. 35, pp. 839-840.

An unsigned article (*Sc. Am. Suppl.* 1911, v. 72, p. 115) discusses the extended utilization of soya bean products.

van der Waerden, Herman, discusses the chemical composition of the soya bean and presents a table showing the chemical and physical characteristics of the oil.—*Pharm. Weekblad*, 1911, v. 48, pp. 889-896.

Tangl and Erdelyi report some observations on the relation of the melting point of fats to the rapidity with which they pass through the stomach.—*Biochem. Ztschr.* 1911, v. 34, pp. 94-110.

Mills and Congdon report observations on the utilization of fats and oils given subcutaneously.—*Arch. Int. Med.* 1911, v. 7, pp. 694-719.

Hertkorn, J., discusses the toxic action of free fatty acids in mineral and vegetable fats and oils.—*Chem. Ztg.* 1911, v. 35, pp. 29-30.

Additional references on the chemistry of fixed oils will be found in *Chem. Abstr.*; *Exper. Sta. Rec.*; and *Chem. Centralbl.*

OLEA VOLATILIA.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, p. 1-17) review the economic conditions of the essential oil market during the year 1910-11.

Miller, A. W., calls attention to Bureau of Plant Industry Bulletin No. 195 by Frank Rabak on the production of volatile oils and perfumery plants in the United States.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 52.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 13) present a table showing the values of imports and exports of essential oils into and from the United States in the half years July-December, 1910 and 1909.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Apr. p. 26) present a table showing the total imports and exports of France.

Norton, Edward J., reports on the essential oil industry in Spain.—Cons. & Tr. Rep. October 2, 1911, p. 11.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, pp. 124-130) review the Ph. Germ. V requirements for essential oils and point out that while these drugs are described in an accurate and pertinent manner it is nevertheless to be regretted that the draft of the new pharmacopœia was not submitted for discussion before final publication. Had this been done, errors and false data, such for instance as those relating to the specific gravity of benzaldehyde, the melting point of fennel oil, and others would certainly have been avoided.

Rosenthaler, L., reviews the volatile oils of the Ph. Germ. V.—Pharm. Zentralh. 1911, v. 52, p. 15ff.

Fleissig reviews the Ph. Germ. V requirements for volatile oils.—Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, pp. 557-559.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 260) states that it is interesting to note that a large number of requirements adopted by the new German Pharmacopœia either correspond to, or closely resemble, many of the parallel proposals suggested by Hill, Umney, Lucas, and Bird.

Beringer, George M., points out that the Ph. Germ. V has included assay processes for the oils of cinnamon, lavender, santal, and mustard.—Proc. New Jersey Pharm. Assoc. 1911, p. 78.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, pp. 130-134) review the Ph. Ross. VI requirements for essential oils and point out that, so far as essential oils are concerned, the work should be described as a reprint rather than as a revision, for, notwithstanding the many obsolete directions and faults of the old pharmacopœia, it has not been considered necessary to submit each separate article to a thorough revision and to pay regard to recent literature on the subject; on the contrary, with two or three exceptions, the old requirements for essential oils have simply been reincorporated into the new work, together with the old errors.

An editorial note (Brit. & Col. Drug. 1911, v. 60, p. 448) points out that the processes for the analysis of essential oils need standardization. The following need most consideration: (1) Adoption of standard temperature for optical rotation; (2) adoption of standard temperature for refractive indices; (3) aldehyde determination methods, viz, sulphite or bisulphite; (4) phenol determination methods by alkali absorption, more especially as regards strength of alkali,

and other conditions; (5) deduction of acid value from saponification value of ester-containing oils, notably bergamot. In addition to the above, general determination processes are other special ones, which include the determination of cineol, determination of carvone, etc. See also Pharm. J. 1911, v. 87, p. 748.

Jeancard, Paul, suggests a way to secure standardization of analytical methods: A congress composed of delegates representing officially the revision committees of pharmacopœias for the industry or those who purchase essential oils.—Am. Perf. 1911-12, v. 6, p. 279.

Tankard, Arnold Rowsby, asserts that all essential oils should conform to distinctly stated physical characters and limits of chemical composition where possible.—Pharm. J. 1911, v. 87, p. 73.

Wiley, H. W., reports that the inspection of the essential oils has been extended during the past year to include all of those recognized in the United States Pharmacopœia.—Ann. Rep. U. S. Dept. Agric. 1911, 1912, p. 431.

Galloway, B. T., reports that in conjunction with cultural tests of volatile oil plants the physiological conditions governing the constitution of volatile oils have been under investigation and have been in part reported on.—*Ibid.* p. 276.

Heinrich Haensel (Bericht, Oct.-Apr. 1910-11, pp. 53-74) presents a review of some of the recent literature on volatile oils.

Jeancard and Satie discuss the chemistry of perfume oils in 1910.—Am. Perf. 1911-12, v. 6, pp. 203-206.

Rochussen, F., presents a review of the progress made in connection with the chemistry of ethereal oils and of perfumes.—Ztschr. ang. Chem. 1911, v. 24, pp. 2185-2195. Also Chem. Ztg. 1911, v. 35, pp. 545-546, 565-567, 574-575.

Mossler, Gustav., discusses the nature of terpene and sesquiterpene free volatile oils.—Ztschr. allg. österr. Apoth.-Ver. 1911, v. 49, pp. 549-551.

Hepburn, Joseph Samuel, reviews some of the recent progress in the chemistry of the terpenes and of camphor.—J. Frankl. Inst. 1911, v. 171, pp. 179-203.

Wallach, O., presents additional contributions to our knowledge of terpene and volatile oils.—Ann. Chem. 1910, v. 379, pp. 182-228, v. 381, pp. 51-113, and v. 384, pp. 193-208.

Henderson and Sutherland present a contribution on the chemistry of the terpenes.—J. Chem. Soc., Lond., 1911, v. 99, pp. 1539-1549.

See also Henderson and Heilbron, *Ibid.* pp. 1887-1901 and 1901-1906.

Semmler and others present contributions on the constituents of volatile oils.—Ber. deutsch. chem. Gesellsch. 1911, v. 44, pp. 52-57, 460-463, 815-819, 991-995, 2009-2016, and 2885-2890.

Müller, W., presents a review of the progress in the chemistry of terpenes and volatile oils.—Fortschr. Chem. 1911, v. 4, pp. 77-94.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Apr. pp. 86-156) present a review of recent publications on the chemistry of perfumes and essential oils. See also Oct. pp. 79-142.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, pp. 144-192) review some of the literature relating to scientific research in the domain of essential oils. See also Oct. 1911, pp. 116-154.

Luftensteiner, H., discusses the nature of volatile oils and their odoriferous principles.—Pharm. Post, 1911, v. 44, pp. 711-714, 719-721, 727-730, 751-753, 767-768, 779-782, 791-794, 799-802.

Iserman, S., presents a communication on chemistry and the perfumery industry.—Am. Perf. 1911-12, v. 6, pp. 84, 138, 157, 180.

A book review (J. Ind. & Eng. Chem. 1911, v. 3, p. 127) calls attention to the first volume of the second edition of Gildemeister and Hoffmann's work on volatile oils. See also Am. Druggist, 1911, v. 58, p. 45.

Utech, P. Henry, commends the wholesale drug firms which attach a label to their volatile oils showing the physical constants, thereby insuring uniformity and accuracy in the finished preparations in which they are employed.—Bull. Pharm. 1911, v. 25, p. 370.

Lilly, J. K., states that records of tests and analysis of this line of products impress one with the constant care exercised by progressive purveyors of essential oils. Nothing seems more sure than the ease of securing oils of uniformly good quality if the source of supply be wisely selected.—Proc. N. W. D. A. 1911, p. 161.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 22) point out that increased knowledge of the constitution of the essential oils has been closely followed by more refined and scientific methods of sophistication. Cheap synthetic esters of low molecular weight have been used to cover additions to oils which are dealt with commercially on an ester basis. Acetone has been employed to augment the apparent percentage of aldehyde, while cheap synthetic aldehyde itself has also been used, as in the case of oil of cinnamon. Such methods as these naturally call for much greater vigilance in testing than was necessary when petroleum, alcohol, and turpentine formed the chief stock-in-trade of the sophisticator.

Smith, Kline & French Co. (Analytical Report, 1911, pp. 28-36) reports its laboratory observations on the physical and chemical constants of official and other volatile oils.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, pp. 75-79) present a table showing the limits most frequently observed or the most desirable range for the various constants of well known volatile oils.

Louise, E., discusses a new method of analysis by curves of miscibility, and its application to the assay of oils, etc., employed in pharmacy and perfumery.—J. Pharm. et Chim. 1911, v. 4, pp. 193-198.

The Committee of Reference in Pharmacy (Third Report, Appendix, p. 37) recommends a saponification process for volatile oils.

Parry, Ernest J., thinks that some slight modifications of the acetylation process should be adopted, such as the use of 15 cc. of acetic anhydride and washing the acetylated oils with brine instead of water.—*Chem. & Drug*. 1911, v. 79, p. 451.

Nelson, E. K., discusses the Walther method for the quantitative determination of ketones in essential oils.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 588–589. See also *Chem. & Drug*. 1911, v. 79, p. 682.

Kleber, C., discusses the determination of citral and citronellal in essential oils, replying to the criticism of J. C. Umney (*Perf. & Ess. Oil Rec.* v. 2, p. 259).—*Am. Perf.* 1911–12, v. 6, p. 284.

Wilkie, John M., discusses the action of iodine on phenols and its application to their volumetric determination.—*J. Soc. Chem. Ind.* 1911, v. 30, pp. 398–402.

In a supplemental paper he outlines a sensitive test for the detection of phenol and salicylic acid.—*Ibid.* p. 402.

Mailhe, A., reports some observations on the production of ethers and esters by means of catalysis.—*Chem. Ztg.* 1911, v. 35, pp. 485–486, 515–516.

Harries and Gottlob report observations on the decomposition of terpenes by red hot metallic wires.—*Ann. Chem.* 1911, v. 383, pp. 228–229.

Henderson and Boyd, in a contribution to the chemistry of the terpenes, report on the synthesis of a menthadiene from thymol, and of a diethylcyclohexadiene from phenol.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 2159–2164.

Roure-Bertrand Fils (*Sc. & Ind. Bull.* 1911, Apr. pp. 22–25) report a cursory study of certain essential oils, including oil of white thyme, oil of origanum, and oil of sage.

Brooks, Benjamin T., reports observations on some new Philippine essential oils.—*Philippine J. Sc.* 1911, v. 6 A. pp. 333–351.

An unsigned article (*Bull. Imp. Inst.* 1911, v. 9, pp. 240 ff.) discusses the physical and chemical properties of the aromatic grass oils.

An editorial (*Pharm. J.* 1911, v. 87, p. 403) discusses the Colonial essential oils, on the basis of the report of the Imperial Institute for the past year.

Rabak, Frank, reports observations on the relation of the odorous constituents of certain plants to plant metabolism.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 1242–1247.

An unsigned note discusses the localization of odors in the different parts of plants.—*Spatula*, 1910–11, v. 17, p. 213.

Howard, Charles D., presents a further contribution on the estimation of essential oils in extracts and pharmaceutical preparations.—*J. Ind. & Eng. Chem.* 1911, v. 3, p. 252. See also *Am. Perf.* 1911–12, v. 6, p. 178 and p. 200.

An unsigned article (N. A. R. D. Notes, 1911, v. 12, p. 1419) states that much confusion seems to exist in regard to the value of terpeneless volatile oils, and points out that it is obviously an advantage to use the terpeneless oils, for the factor of "depreciation of odor" is practically removed.

Villere, R. L., notes that air and light are accountable for the rank odor of essential oils, and recommends that essential oil bottles be kept always filled to the cork by replacing the oil removed by an equal amount of water.—Bull. Pharm. 1911, v. 25, p. 475.

An unsigned article (Drug Topics, 1911, v. 26, p. 230) calls attention to some recent work on the antiseptic action of volatile oils.

An editorial (Fol. Therap. 1911, v. 5, p. 32) comments on the antiseptic power of certain essential oils and points out that some of them might very well replace carbolic acid or the benzoates or sulphocarbolates of soda in the therapeutics of gastric diseases where there are signs of intestinal decomposition and putrefactive fermentation.

Coupin, Henri, discusses the comparative toxicity of vegetable oils upon the higher vegetables, with tabulated statements of results and a classified list of the essential oils studied.—Compt. rend. Acad. sc. 1911, v. 152, pp. 529-531.

OLEUM ADIPIS.

Wilcox, Levi, asserts that the purchasing of lard oil by one not an expert is quite a difficult problem. On analysis, samples will be found to vary from the finest selection of prime winter strained lard oil down to a poor off-prime oil, adulterated with 50 per cent of petroleum.—Proc. N. W. D. A. 1911, p. 108.

Smith, Kline & French Co. (Analytical Report, 1911, p. 30) reports that 7 samples of lard oil were of satisfactory quality.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 81) suggest the following limitation of the constants for lard oil: Specific gravity (15/15°), 0.914 to 0.917; refractive index (15°), 1.4694; saponification value, 195 to 196; iodine value, 52 to 77; acid value, 1 to 2.

OLEUM ÆTHEREUM.

Murphy, Thos. W., comments on the lack of reliable information as to ethereal oil, and asks why may a druggist not buy any heavy oil of wine that meets the requirements of the National act and mix it with an equal volume of ether.—Bull. Pharm. 1911, v. 25, p. 81.

Craig, Hugh, reports that the retention of ethereal oil was favored because it would continue to be prescribed.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 608.

Smith, Kline & French Co. (Analytical Report, 1911, p. 30) reports that 2 samples of ethereal oil were examined. The constants of 1 sample indicated light oil of wine.

OLEUM AMYGDALÆ AMARÆ.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 76) suggest the following limitation of the constants for oil of almond with HCN: Specific gravity (15/15°), 1.048 to 1.070; optical rotation (20° to 25°), 0°; refractive index (20°), 1.545 to 1.557; soluble in 3 volumes of 60 per cent and in 2.5 volumes of 70 per cent alcohol, and from 2 to 6.6 per cent HCN.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 22) report that they find the refractive index for synthetic benzaldehyde to be a practically constant figure, 1.5454.

OLEUM AMYGDALÆ EXPRESSUM.

Hartwich, C., comments on the Ph. Germ. V monograph for expressed oil of almonds, and thinks that tests for adulteration with sesame and cotton seed oil should have been introduced.—Apoth.-Ztg. 1911, v. 26, p. 34.

See also Chem. & Drug. 1911, v. 78, p. 230.

The Committee of Reference in Pharmacy (Third Report, p. 10) suggests for almond oil a saponification value, 188 to 196; iodine value, 93 to 100; acid value, not exceeding 4.0; specific gravity, 0.915 to 0.920; refractive index at 40°, 1.4624 to 1.4640. The test for peach and apricot oils is modified.—See also Pharm. J. 1911, v. 87, p. 591.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 5) again record their experience that the index of refraction, 1.4729 to 1.4730, laid down by Bird and Lucas (Pharm. J. 1910 (2), p. 468), is too high. Working on 11 samples from perfectly reliable sources they have found this factor to vary between 1.4710 and 1.4720.

Hérissey, H., criticizes the Codex process for the preparation of decolorized almond oil.—J. Pharm. et Chim. 1911, v. 4, pp. 451–455.

Serger, H., calls attention to the reactions that are characteristic of expressed oil of almond.—Chem. Ztg. 1911, v. 35, p. 611.

Ross and Race present a note on almond and apricot kernel oils.—Analyst, 1911, v. 36, pp. 263–265.

Pearson, W. A., reports that a sample of oil of peach kernels was found which was evidently adulterated with poppy-seed oil.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 345.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 6) report the examination of 17 samples of almond oil, specific gravity 0.9175 to 0.919; refractive index, 1.472 to 1.473; iodine value, 97.2 to 101.7; and acid value, 0.8 to 4.8.

OLEUM ANISI.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 21) review the economic conditions of the anise market, and point out that in

spite of its somewhat unattractive appearance last year's anise turned out to be very rich in oil.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Oct. p. 49) report that the outlook for the crop of anise seed in Russia is distinctly bad, although the land devoted to its cultivation is from 15 to 20 per cent more extensive than in latter years.

Heckel, Édouard, presents a note on a new plant from Madagascar containing 4 to 5 per cent of anise oil.—Compt. rend. Acad. sc. 1911, v. 152, p. 565.

Heinrich Haensel (Bericht, Oct.–Apr. 1910–11, p. 7) points out that the Ph. Germ. V now describes volatile oil of anise, and that the oxygen containing constituent, anethol, can no longer be dispensed when oil of anise is prescribed.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 127) point out that, when anise oil is badly kept or has been repeatedly melted, the congealing point is gradually reduced, while at the same time the specific gravity increases.

Rosenthaler, L., in a review of the Ph. Germ. V, states that the radical changes in the requirements for oil of anise are due to the fact that the oil is now official in place of anethol, which was formerly described under the title "*Oleum Anisi*."—Pharm. Zentralh. 1911, v. 52, p. 15.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 230) points out that for the oil, as now official, the Ph. Germ. V requires an optical rotation at 20° up to –2°; specific gravity at 20°, 0.980 to 0.990; and solidifying point 15° to 19°. Solubility 1 to 3 of alcohol. See also Pharm. J. 1911, v. 86, p. 654, and Apoth.-Ztg. 1911, v. 26, p. 44.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 131), discussing the Ph. Ross. VI requirements for oil of anise, assert that it is advisable to take the specific gravity at about 20°; the limits of value remain unchanged.

An unsigned abstract (Oil & Color Tr. J.) criticizes the Ph. Ross. requirements for aniseed oil. The solidifying point should be 15° rather than 10°.—Am. Perf. 1911–12, v. 6, p. 155.

The Committee of Reference in Pharmacy (Third Report, p. 11) suggests for oil of anise, specific gravity at 20° (compared with water at 15.5°), 0.975 to 0.990 (rising on keeping); optical rotation, –2° to +1°; refractive index at 25°, 1.552 to 1.558. It congeals, when stirred, at about 10° and should not melt again at a temperature below 15°. At least 80 per cent should distil between 225° and 235°. Soluble in three volumes of alcohol (90 per cent).

Parry, Ernest J., objects to the proposed monograph on aniseed oil because it will continue to be a direct incentive to adulteration,

and will keep the Ph. Brit. guarantee in disrepute. He makes a suggestion as to congealing and melting points.—Chem. & Drug. 1911, v. 79, p. 450. See also p. 523.

Hill and Umney, commenting on the article by Parry, point out that it may be better to state that "the temperature should rise to at least 15° on freezing the oil." It must not be forgotten, however, that oil of anise is affected both as regards this physical character and specific gravity by long keeping.—*Ibid.* p. 492.

Gehe & Co. (Handelsbericht, 1911, p. 88) point out that oil of star anise as well as oil of anise seed gradually increase in specific gravity due to a conversion of the anethol into dianethol. This is not an oxidation process as has been suspected, as a sample of anethol containing oil which had been kept for 23 years failed to show the presence of anisaldehyde or anisic acid. They also point out that the sample of oil of anise has been changed from a lævorotatory to a dextrorotatory oil.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Apr. pp. 129-130) review several papers on oil of anise and oil of badiana (star anise).

Tafel and Schepss report some experimental work on the electrolytic reduction of anise aldehyde.—Ber. deutsch. chem. Gesellsch. 1911, v. 44, pp. 2148-2154.

Smith, Kline & French Co. (Analytical Report, 1911, p. 30) reports that 3 samples of oil of anise were examined; optical rotation at 25°, -1° to -1.42°.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 10) report on 13 samples of aniseed oil; specific gravity (20°), from 0.9768 to 0.9870; optical rotation, +0.10° to -2°; refractive index (20°), 1.5511 to 1.5565; melting point, 16.25° to 19°; and soluble in 90 per cent alcohol, 1.25 to 3.5 volumes. See also p. 76.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 22) point out that the results of tests applied to 7 samples give the following variations: Specific gravity, 0.9750 to 0.988; rotation, -0.50° to +0.20°; congealing point, 10° to 16°; melting point, 13° to 19°; refractive index, 1.5491 to 1.5947; 4 soluble in 3 volumes of 90 per cent alcohol, 1 insoluble, 1 soluble at 27°, and 1 at 21°.

Linke, H., reports finding a sample of oil of anise with a specific gravity of 0.9846 at 20°, congealing point of 16°, and optical rotation of -1.2°, being well within the Ph. Germ. V requirements.—Ber. pharm. Gesellsch. 1911, v. 21, p. 193.

Howard, Charles D., reports 1 sample of spirit of anise which contained but 46 per cent of the required amount of oil.—New Hampshire San. Bull. 1911, v. 3, No. 14, p. 282.

He also reports on 20 samples of spirit of anise, 6 of which were found to be not of U. S. P. quality.—*Ibid.* No. 13, p. 254.

OLEUM AURANTII CORTICIS.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, pp. 66-67) review the economic condition of the orange oil market, and point out that the physico-chemical conditions of the current season's oils are equal to those of the previous season.

See also *Ibid.* Oct. 1911, pp. 43-44.

Smith, Kline & French Co. (Analytical Report, 1911, p. 30) reports that 4 samples of oil of orange peel were examined; optical rotation at 25°, from +95° to +103°.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 54) report on 3 samples of sweet orange oil, the specific gravity of which was found to vary from 0.849 to 0.8508, the optical rotation from +96.2 to 98.10°, and refractive index from 1.4723 to 1.473. See also p. 78.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 28) report that they almost invariably find a considerable difference in the physical characters of the bitter and sweet orange oils, this being especially marked with the optical rotation.

OIL OF BERGAMOT.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Oct. p. 56) report that the year 1911 has seen oil of bergamot at prices unknown for forty years. Although not absolutely bad, the production was by no means brilliant.

Schimmel & Co. (Semi-Annual Report, 1911, Apr. p. 63) report that the prospects of the new crop of bergamot oil are more favorable than in the preceding year.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Apr. pp. 98-105) call attention to a number of the recent contributions on the chemistry of oil of bergamot.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 131), discussing the Ph. Ross. VI requirements for bergamot oil, point out that detonation tests with iodine are quite valueless for the estimation of essential oils.

They also (*Ibid.* p. 67) report that the optical rotation of bergamot oil is on an average somewhat lower than usual and the oil is distinguished by a particularly fine odor.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 15) report on 8 samples of undoubted purity, the specific gravity of which ranged from 0.8825 to 0.8853, the optical rotation from +11.22° to +13.49°, the refractive index from 1.4659 to 1.4669, and the apparent anisyl acetate from 36.4 to 40.2 per cent. See also p. 76.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 24) report that none of the 3 samples of oil of bergamot tested dissolved clearly in 2 volumes of 80 per cent alcohol.

OLEUM BETULÆ.

Stanislaus and Semmel outline a test to distinguish between oil of gaultheria, oil of betula, and methyl salicylate.—Proc. Pennsylvania Pharm. Assoc. 1911, pp. 245-247.

Smith, Kline & French Co. (Analytical Report, 1911, p. 30) reports that 52 samples of oil of betula were examined. Four samples were rejected, as special tests indicated that they were mixtures of oil of birch and synthetic methyl salicylate.

Pearson, W. A., reports that 3 lots of oil of birch were rejected because the presence of added synthetic methyl salicylate was suspected.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 125. Also Bull. Am. Pharm. Assoc. 1911, v. 6, p. 346.

OLEUM CADINUM.

An unsigned abstract (Perf. & Ess. Oil Rec. Apr.) suggests the following characters and tests for oil of cade: It is a vegetable tar of a brownish-red color, transparent, clear, of homogeneous aspect and not lumpy, possessing a special smell like wood smoke, with a density inferior to water. It is produced by dry distillation of *Juniperus oxycedrus*. The tar is almost insoluble in water, to which it gives an acid reaction, it is partly soluble in cold alcohol, completely soluble in heated alcohol 90 per cent, in ether, chloroform, and bisulphide of carbon.—Pharm. J. 1911, v. 86, p. 567.

Planchon, Louis, presents a communication on oil of cade, with several illustrations.—Bull. pharm. Sud-Est, 1911, v. 16, pp. 593-606.

Ganz, E. (Ger. Pat. 236,446, July 27, 1910), describes a process for preparing a nearly odorless and nonirritant, therapeutically active preparation from oil of cade.—J. Soc. Chem. Ind. 1911, v. 30, p. 1088.

OLEUM CAJUPUTI.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 25) report that of 1,536 baskets of cajuput oil exported from Macassar, 860 went to America, which indicates that there at least cajuput oil continues to maintain its old popularity. See also *Ibid.* Oct. 1911, p. 24.

The Committee of Reference in Pharmacy (Third Report, p. 11) proposes for oil of cajuput the specific gravity, 0.919 to 0.930; optical rotation not more than -4° ; refractive index at 25° , 1.460 to 1.467; to yield at least 45 per cent by volume of cineol by the phosphoric acid test. See also Pharm. J. 1911, v. 87, p. 591.

Parry, Ernest J., points out that it is not cineol that one obtains by the proposed method of assay for oil of cajuput, but a mixture of cineol and terpenes. The U. S. P. method gives more concordant results.—Chem. & Drug. 1911, v. 79, p. 450.

Hill and Umney, commenting on the paper by Parry, state that the U. S. P. process has been rejected by Schimmel & Co. and analysts

in this country who have tested its accuracy. The results may be concordant but in their opinion are always low.—*Ibid.* p. 492.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 131), discussing the Ph. Ross. VI requirement that cajuput oil be not soluble in carbon disulphide, point out that all essential oils are soluble in carbon disulphide.

Smith, Kline & French Co. (Analytical Report, 1911, p. 30) reports that 7 samples of oil of cajuput were examined; cineol content from 35 to 65 per cent. One sample was rejected because it had a high specific gravity and inferior appearance, and one on account of its low cineol content. All 7 samples contained traces of copper.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 24) report that 4 samples of oil of cajuput were examined, the results obtained being quite normal; specific gravity, 0.9180 to 0.9220; refractive index, 1.4695 to 1.4710.

Jones, Eli G., states that in hiccough after an attack of apoplexy the oil of cajuput, first x dilution, is the remedy; 5 drops every 15 minutes until relieved.—*J. Therap. & Diet.* 1911, v. 5, p. 367.

OLEUM CARI.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Apr. pp. 55–58) describe and illustrate the cultivation of caraway in Holland.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 39) review the economic conditions of the market for caraway and conclude that the scanty oil yield of 1910 caraway was due to the bad weather during the summer and especially during the harvesting months.

Heinrich Haensel (Bericht, Oct.-Apr. 1910–11, p. 25) points out that the Ph. Germ. V now requires the volatile oil of caraway to be dispensed when "oleum carvi" is prescribed.

See also Hartwich, C., *Apoth.-Ztg.* 1911, v. 26, p. 45.

Rosenthaler, L., in a review of the Ph. Germ. V, points out that the radical changes in the requirements for this oil are due to the fact that the oil is now again official in place of carvone, which was formerly described under the title "Oleum Carvi."—*Pharm. Zentrallh.* 1911, v. 52, p. 15.

See also *Pharm. J.* 1911, v. 86, p. 654; and *Chem. & Drug.* 1911, v. 78, p. 230.

The Committee of Reference in Pharmacy (Third Report, p. 12) proposes for oil of caraway: Specific gravity, 0.910 to 0.920 (as now); optical rotation, 75° to 82°; refractive index at 25°, 1.485 to 1.497; soluble in 1 volume of 90 per cent alcohol, and in 10 volumes of 80 per cent; at least 50 per cent to distil above 200°. See also *Pharm. J.* 1911, v. 87, p. 591.

Parry, Ernest J., thinks +75° too high for the minimum optical rotation for oil of caraway. He has met with plenty of samples of

good quality with a rotation of $+72^{\circ}$ to $+73^{\circ}$.—Chem. & Drug. 1911, v. 79, p. 450.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 19) report that 2 samples of English oil had a specific gravity of 0.9116 to 0.9120; optical rotation, $+78.30^{\circ}$ to 79.10° ; refractive index, 1.4869 to 1.4867; and were soluble in 5 volumes of 80 per cent alcohol.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 24) report on 6 samples of foreign caraway oil, 2 of which were of somewhat poor quality: Specific gravity, 0.9090 to 0.9185, rotation, $+74.75^{\circ}$ to 78.5° ; distillate above 200° , 49 to 61 per cent; refractive index, 1.4860 to 1.4893.

Vance, U. G., states that caraway oil will surely shorten the duration of pertussis, but it must be used in small doses.—J. Therap. & Diet. 1911, v. 5, p. 157.

Bennet, J. Gordon, reports a case of hiccough successfully treated by the external application of oil of caraway over the pit of the stomach, below the sternum.—Ellingwood's Therap. 1911, v. 5, pp. 14-15.

Ketterly, John, reports on the use of an embrocation of oil of caraway which is thought to be particularly efficient in cases of whooping cough.—*Ibid.* pp. 95-96.

OLEUM CARYOPHYLLI

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Apr., p. 59) report that the last harvest of cloves was a very poor one. See also Oct., p. 53.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, pp. 52-53) present a table showing the quantity and value of cloves exported from Zanzibar during the years 1908 and 1909.

Rosenthaler, L., in a review of the Ph. Germ. V, points out that the radical changes in the requirements for oil of cloves are due to the fact that the oil is now again official in place of eugenol, which was formerly described under the title "*Oleum Caryophyllorum*."—Pharm. Zentralh. 1911, v. 52, p. 15.

See also Hartwich, C., Apoth.-Ztg. 1911, v. 26, p. 45.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 230) states that for oil of cloves the requirements are: Optical rotation at 20° , up to -1.25° ; specific gravity, 1.044 to 1.070; soluble in 2 parts of alcohol 69 per cent. See also Pharm. J. 1911, v. 86, p. 654.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 127), in discussing the Ph. Germ. V requirements for clove oil, report that they have observed up to -1.60° optical rotation in their own distillates. The eugenol content should not fall below 80 per cent.

The Committee of Reference in Pharmacy (Third Report, p. 12) proposes the specific gravity, 1.047 to 1.065; refractive index at 25°, 1.528 to 1.540; soluble in 3 volumes of 70 per cent alcohol; to show at least 85 per cent by volume of eugenol, by the potash test. See also Pharm. J. 1911, v. 87, p. 591.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 131), discussing the Ph. Ross. VI requirements for clove oil, point out that the color of clove oil is yellowish, becoming darker with age.

Smith, Kline & French Co. (Analytical Report, 1911, p. 31) reports that 4 samples of oil of cloves were examined. Eugenol content, from 83 to 92 per cent.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 25) report that a considerable number of samples of clove oil have been assayed for eugenol and tested in other ways. In no case was any deviation from the normal characters observed: Specific gravity, 1.052 to 1.058; eugenol, 80 to 90 per cent; refractive index, 1.5305 to 1.5340.

OLEUM CHENOPODII.

Wiley, H. W., reports that a chemical investigation of oil of chenopodium has served to develop the extension of our knowledge of the properties of the peculiarly active medicinal ingredient, ascaridol.—Ann. Rep. U. S. Dept. Agric. 1911–12, p. 436.

Nelson, E. K., reports a chemical investigation of the oil of chenopodium and discusses the chemical nature of ascaridol.—Circ. Bur. Chem. U. S. Dept. Agric. 1911, No. 73, pp. 10. See also J. Am. Chem. Soc. 1911, v. 33, pp. 1404–1412, and Oil, Paint and Drug Reporter, 1911, v. 80, July 10, p. 40.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 120) point out that American wormseed oil has lately acquired a reputation in Germany as a reliable anthelmintic and, because of its widespread use, has more than doubled in price within the last six months.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 74) report that 1 sample of wormseed oil had a specific gravity of 0.9745, an optical rotation of -5.58° , a refractive index of 1.476, and was soluble in 4.5 volumes of 70 per cent alcohol.

Wood, H. C., jr., calls the attention of the Committee of Revision to Brüning's method of standardizing oil of chenopodium (Ztschr. exper. Pharm. u. Therap. 1906, v. 3, pp. 564–587) by determining the vermifugal effect on the intestinal worms obtained from the alimentary tract of dogs and cats.—J. Am. M. Assoc. 1911, v. 56, p. 606.

Gehe & Co. (Handelsbericht, 1911, p. 90) call attention to the rapidly extending use of the oil of *Chenopodium anthelminticum* as a remedy for ascarides. The active constituent is thought to be a

substance having the chemical composition $C_{10}H_{16}O_2$, to which the name ascaridol has been given.

Riedel's *Berichte* (1911, p. 99) points out that oil of chenopodium, which is official in the United States, was used in Germany more than 50 years ago and is only now being reintroduced.

Rabe, R. P., states that chenopodium is indicated in cases of pain in spine.—*Hahnemann. Month.* 1911, v. 46, v. 399.

OLEUM CINNAMOMI.

Miller, Adolph W., points out that only the purified oil of cassia will comply with the tests of the U. S. P.—*Proc. N. W. D. A.* 1911, p. 93.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 41) state that in Germany the demand for oil of cassia will no doubt undergo some restriction because in the Ph. Germ. V this oil has been superseded by Ceylon cinnamon oil. See also *ibid.* Oct. 1911, pp. 30–32.

Smith, Kline & French Co. (Analytical Report, 1911, p. 31) reports that 3 samples of oil of cinnamon were examined; cinnamic aldehyde from 75 to 85 per cent. One was rejected as showing traces of lead and copper. It also gave a reaction for the presence of petroleum and rosin.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 76) suggest the following limitation of the constants for oil of cassia: Specific gravity (15/15°), 1.061 to 1.070; optical rotation (20° to 25°), -1° to $+3^\circ$; refractive index (20°), 1.588 to 1.596; soluble in 1.5 to 4 volumes of 70 per cent alcohol; and should contain 71 to 85 per cent of aldehyde (determined by means of acid sodium sulphite).

Hoffmann and Evans report some observations on the use of spices as preservatives and point out that cinnamic aldehyde and eugenol, as such, possess considerable preservative action and aid materially in preserving substances to which they are added.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 835–838.

OLEUM CINNAMOMI ZEYLANICUM.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 43) differ from the opinion expressed by Meyer that oil of Ceylon cinnamon is preferable to oil of cassia because of the somewhat high eugenol content, and point out that oil of Seychelles cinnamon has a relatively higher eugenol content.

Rosenthaler, L., states that the Ph. Germ. V describes oil of Ceylon cinnamon in place of the oil of Saigon cinnamon formerly official.—*Pharm. Zentralh.* 1911, v. 52, p. 16.

See also Hartwich, C., *Apoth.-Ztg.* 1911, v. 26, p. 45; *Chem. & Drug.* 1911, v. 78, p. 230; and *Pharm. J.* 1911, v. 86, p. 654.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 125), in discussing the Ph. Germ. V, express the opinion that it was certainly a very proper step to discard cassia oil, which has been official up to the present time, in favor of Ceylon cinnamon oil, which not only has a much more agreeable odor but of which it is also easier to guarantee the purity and quality.

The Committee of Reference in Pharmacy (Third Report, p. 12) proposes the specific gravity, 1.000 to 1.030; optical rotation, -0.5° to -1° ; refractive index, 25° , 1.565 to 1.580; soluble in 3 to 4 volumes of 70 per cent alcohol; to contain 55 to 65 per cent by volume of aldehyde. See also Pharm. J. 1911, v. 87, p. 591.

Parry, Ernest J., thinks that it is inconceivable why the Committee of Reference in Pharmacy should have recommended the use of neutral sodium sulphite for the absorption of cinnamic aldehyde in preference to the acid sulphite.—Chem. & Drug. 1911, v. 79, p. 450. See also p. 523.

Hill and Umney, in commenting on the paper by Parry, state that they prefer the neutral sulphite process.—Chem. & Drug. 1911, v. 79, p. 492.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 24) again find that samples of cinnamon oil from abroad show higher percentages of cinnamic aldehyde than those claimed by English distillers to be characteristic of the genuine oil.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 76) suggest the following limitation of the constants for oil of cinnamon: Specific gravity ($15/15^{\circ}$), 1.0 to 1.03; optical rotation (20°), -0.5° to -1° ; refractive index (20°), 1.564 to 1.579; soluble in 3 to 4 volumes of 70 per cent alcohol; and should contain 55 to 65 per cent of aldehyde (determined by means of sodium sulphite).

OLEUM COPAIBA.

The Committee of Reference in Pharmacy (Third Report, p. 13) proposes the specific gravity, 0.896 to 0.910; optical rotation, -7° to -35° ; refractive index at 25° , 1.494 to 1.500; to distil between 250° and 275° . A color test for gurjun oil is given and a rotation test for African copaiba oil. See also Pharm. J. 1911, v. 87, p. 591.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 26) report that a sample of the bulked distillate from several hundred pounds of copaiba gave the following results: Specific gravity, 0.9030; rotation, -14.13° ; refractive index, 1.4971; distilled between 250° and 263° .

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 25) report the following essential oil values for genuine copaiba balsam: Specific gravity from 0.898 to 0.907, optical rotation from -9.14° to -21.44° , and refractive index from 1.492 to 1.501. See also p. 77.

Dixon, W. E., states that the essential oils of copaiba, cubebs, and sandalwood are used, since they are less irritant, and therefore can be given in larger doses than most others, but that they act unequally on different organisms; they are quite feeble against putrefactive organisms or *Bacillus coli*, but against staphylococci they exert quite a powerful antiseptic action.—Pharm. J. 1911, v. 87, p. 17.

OLEUM CORIANDRI.

Tunmann, O., in a report on the drug trade of Hamburg, points out that the drug from Russia and from Galicia is used principally for the production of oil of coriander.—Apoth.-Ztg. 1911, v. 26, p. 378.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 55) note that the consumption of oil of coriander during the past year proved to be less considerable than might have been expected from the experience of the last few years.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Oct. p. 50) report that the sowings of coriander this year have been less, but fortunately the plantations have not had to suffer very much from the temperature.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 77) suggest the following limitation of the constants for oil of coriander: Specific gravity (15/15°), 0.870 to 0.885; optical rotation (20° to 25°), +8° to +14°; refractive index (20°), 1.463 to 1.4675; and soluble in 3 volumes of 70 per cent alcohol.

OLEUM CUBEBAE.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 56) report that they have had an extraordinary demand for oil of cubebs. They also report that the imports of cubebs continue to remain smaller than the requirements, and that the United States is still in the market at full rates.

The Committee of Reference in Pharmacy (Third Report, p. 13) proposes the specific gravity, 0.910 to 0.930 (as now); optical rotation, -25° to -40°; refractive index at 25°, 1.486 to 1.500; at least 80 per cent to distil between 250° and 280°. See also Pharm. J. 1911, v. 87, p. 591.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 29) report on 5 samples of cubeb oil, the specific gravity of which varied from 0.9177 to 0.9265, the optical rotation from 24.16° to 31.56°, the refractive index from 1.4928 to 1.4963; all were soluble in from 0.5 to 1 volume of 90 per cent alcohol. See also p. 77.

Smith, Kline & French Co. (Analytical Report, 1911, p. 31) reports that 3 samples of oil of cubeb were examined; optical rotation at 25°, -30° to -34.24°.

OLEUM ERIGERONTIS.

Smith, Kline & French Co. (Analytical Report, 1911, p. 32) reports that 2 samples of oil of erigeron were examined and considered of satisfactory quality, but did not precisely meet the U. S. P. requirements for specific gravity. They were within the limits given by other authorities. Specific gravity was from 0.875 to 0.876. See also Proc. Pennsylvania Pharm. Assoc. 1911, p. 125; and Bull. Am. Pharm. Assoc. 1911, v. 6, p. 345.

OLEUM EUCALYPTI.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 73) call attention to the second part of vol. II of J. H. Maiden's work, entitled "A Critical Revision of the Genus Eucalyptus."

Binz, Edward C., in a paper on the commercial growing of eucalyptus for its oil, asserts that there is no doubt that in time eucalyptus will rank with gold and petroleum in making the reputation of the State of California.—Brit. & Col. Drug. 1911, v. 59, p. 17.

An unsigned article (Oil, Paint, and Drug Reporter, 1911, v. 80, Dec. 4, p. 28H) calls attention to a report on the present state of the eucalyptus oil industry in the colony of New South Wales.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 72) reports that business in two Australian varieties of eucalyptus oils has been unsatisfactory, to the extent that under the pressure of a considerable overproduction the selling prices leave hardly any profit.

The Committee of Reference in Pharmacy (Third Report, p. 14) proposes the specific gravity, 0.910 to 0.930 (as now); optical rotation, -10° to $+10^{\circ}$ (as now); soluble in 5 volumes of 70 per cent alcohol; to yield at least 55 per cent by volume of cineol by the phosphoric acid test; the test for phellandrene is modified by the addition of petroleum spirit. See also Pharm. J. 1911, v. 87, p. 591.

Parry, Ernest J., points out that it is not cineol that one obtains by the proposed method of assay for oil of eucalyptus, but a mixture of cineol and terpenes. The U. S. P. method gives more concordant results.—Chem. & Drug. 1911, v. 79, p. 450. See also p. 523.

Hill and Umney, commenting on the article by Parry, point out that the process of the U. S. P. has been rejected by Schimmel & Co. and analysts in this country who have tested its accuracy. The results may be concordant, but in their opinion they are always low.—Chem. & Drug. 1911, v. 79, p. 492.

Brown, J. A., replies to the criticism of C. Hill, on his discussion of the estimation of small quantities of essential oil in spices, etc.—Pharm. J. 1911, v. 87, p. 839.

Murray, B. L., states that the U. S. P. test for oil of eucalyptus yields a wholly insufficient quantity of cineol to apply the numerous tests given in the text under eucalyptol.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 15.

Smith, Kline & French Co. (Analytical Report, 1911, p. 32) reports that 23 samples of oil of eucalyptus were examined. Three samples had an abnormal optical rotation at 25° from -1.7° to -2.5° . The cineol content ranged from 33 to 81 per cent.

Pearson, W. A., reports that a sample of oil of eucalyptus marked 74-75 per cent cineol assayed 50 per cent cineol by the U. S. P. method and 64 per cent by the resorcinol method.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 125. Also Bull. Am. Pharm. Assoc. 1911, v. 6, p. 345.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 31) report on 20 samples of Ph. Brit. oil of eucalyptus, having a specific gravity of from 0.919 to 0.9269, an optical rotation from $+0.12$ to -5.0° , a refractive index from 1.4598 to 1.4633, and from 74.4 to 89.3 per cent cineol. See also pp. 31, 77.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 26) report that the following figures for a number of samples of eucalyptus oil offered commercially as Ph. Brit. show considerable differences, more especially with respect to optical rotation: Specific gravity, 0.9110 to 0.9215; rotation, -9.59° to 0° ; refractive index, 1.4610 to 1.4673. Globulus oils gave: Specific gravity, 0.921 to 0.9265; rotation, -2.2° to $+1.07^{\circ}$; refractive index, 1.4610 to 1.4630. Eucalyptol determined on 1 sample by the phosphoric acid method amounted to 72 per cent.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, p. 49) report that eucalyptus oil has lately been used extensively in Australia in the processes of preparing sulphides of zinc and lead.

They also (*Ibid.* Apr. 1911, p. 73) quote Milke, who recommends oil of eucalyptus as a prophylactic against scarlatina, and also as a remedy in the disease, rubbing the whole body of the patient from head to foot and immediately at the beginning of the affection. The treatment is to be continued four days, and during the first 24 hours the mucous membrane of the pharynx should be disinfected every two hours with a 10 per cent carbolic acid. The treatment is said to cure the disease and to prevent contagion.

Schultz, W. H., reports some observations on the use of oil of eucalyptus as a remedy in the treatment of hookworm disease.—Tr. Am. M. Assoc. Sec. Pharm. & Therap. 1911, pp. 56-59.

Foggie, W. E., reports a case of eucalyptus oil poisoning in a boy of 6 years, with a brief reference to the literature.—Brit. M. J. 1911, v. I, p. 359.

OLEUM FENICULI.

Tunmann, O., in discussing the drug trade of Hamburg, points out that German fennel is considered too costly for the production of the volatile oil and the distillers usually prefer the Roumanian or the grayish-green Galician drug.—Apoth.-Ztg. 1911, v. 26, p. 385.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, p. 51) report that while at first the prospects of the present year's crop were very favorable, there have recently been complaints that unusually heavy rains have greatly damaged the plants and that only a good medium crop can be looked for.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 654) points out that the optical rotation at 20° is given as +12° to +24°.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 128), in discussing the Ph. Germ. V requirements for oil of fennel, point out that it should be noticed that in certain circumstances fennel oil may be strongly cooled without solidifying. See also comments on Ph. Ross. VI, p. 131.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 31) report on 1 fine sample of genuine English oil that had a specific gravity of 0.984, an optical rotation of +3°, a refractive index of 1.5506, a melting point of 14.5°, and was soluble in 0.5 volume of 90 per cent alcohol.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 26) report that 5 samples of oil of fennel have been submitted to their analysts during the year, the results being uniformly satisfactory. Specific gravity, 0.9675 to 0.9740; rotation, +13.06 to +14.68°; congealing point, 4° to 6°; refractive index, 1.5343 to 1.5363.

OLEUM GAULTHERIE.

Lloyd, John Uri, states that the first record of the therapeutical use of oil of gaultheria is to be found in empirical medicine as a constituent of a proprietary remedy. It was also used in domestic medicine and was introduced to medical practice by Wooster Beach about 1833.—Bull. Lloyd Libr. 1911, No. 18, pp. 38–41. Also Nat. Eclect. M. Assoc. Quart. 1910–11, v. 2, pp. 333–335.

Henkel, Alice, describes and illustrates wintergreen, *Gaultheria procumbens* L., also gives synonyms, other common names, the habitat and range, and some data on the collection, prices, and uses.—Bull. Bur. Plant Ind. U. S. Dept. Agric. 1911, No. 219, p. 19.

Kremers, Edward, believes that employment for thousands of Wisconsin Indians, whose chief means of livelihood now is picking cranberries during a few months of the year, could be furnished by establishing wintergreen distilleries to be operated by the redskins.—Pharm. Era, 1911, v. 44, p. 549.

Stanislaus and Semmel outline a test to distinguish between oil of gaultheria, oil of betula, and methyl salicylate.—Proc. Pennsylvania Pharm. Assoc. 1911, pp. 245–247.

An editorial (Am. Druggist, 1911, v. 58, p. 140) discusses the distillation of oil of wintergreen, especially in Monroe County, Pa., and states that the production this year will be from 5,500 to 6,000 pounds.

True, R. H., points out that there is a continuous demand for all the natural oil of wintergreen that can be found, despite the fact that it brings many times the price of the synthetic product.—Proc. N. W. D. A. 1911, p. 179.

Miller, Adolph W., comments on the comparative prices of oil of wintergreen, natural oil of sweet birch, and methyl salicylate. Some authorities hold that natural oil of wintergreen can not be commercially produced from the wintergreen leaves alone, as the cost would be prohibitive.—*Ibid.* p. 96.

Smith, Kline & French Co. (Analytical Report, 1911, p. 32) reports that 2 samples of oil of gaultheria were examined and found to conform to U. S. P. tests for purity. It is doubtful if there is much genuine oil of wintergreen on the market.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 73) report that 3 samples of wintergreen oil, with some indications of added methyl salicylate had a specific gravity of 1.1875 to 1.1881, a refractive index of 1.5362 to 1.5363, and a saponification value of 369.6 to 372.4. See also p. 79.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 119) point out that oil of gaultheria is used only in the United States.

Beardsley, E. J. G., finds oil of gaultheria useful and efficient in removing adhesive plaster. Where extensive areas are to be removed the application of an ointment of adeps lanæ hydrosus with 10 per cent of oil of wintergreen incorporated is even more useful than the oil alone.—J. Am. M. Assoc. 1911, v. 56, p. 263.

Street, John Phillips, reports on 11 samples of wintergreen extract, 5 of which were adulterated or below standard.—Rep. Connecticut Agric. Exper. Sta. for 1910, 1911, p. 581. See also pp. 513-515.

Howard, Charles D., reports that 2 of the 8 samples of spirit of wintergreen contained 10 per cent less oil than required by the Pharmacopœia.—New Hampshire San. Bull. 1911, v. 3, No. 14, p. 282.

He also reports on 5 samples of spirit of gaultheria, 3 of which were misbranded and adulterated.—*Ibid.* v. 3, No. 13, p. 253.

Notices of Judgment, Nos. 764, 936 and 1126, under the food and drugs act, deal with the adulteration and misbranding of extract of wintergreen.

OLEUM GOSSYPII SEMINIS.

Wilson, R. C., reports that a good many samples labeled "sweet oil" were found to be cotton seed oil.—Proc. Georgia Pharm. Assoc. 1911, p. 35.

Cheatham, T. A., states that "sweet oil" is not an accepted synonym for cotton seed oil and the latter should never be dispensed when "sweet oil" is asked for.—Proc. Georgia Pharm. Assoc. 1911, p. 37.

Serger, H., in a discussion on the valuation of fatty oils, describes the reactions characteristic of cotton seed oil and presents a number

of references to the literature on the subject.—Chem. Ztg. 1911, v. 35, pp. 610–611.

Gardner, Henry A., gives the following constants for cotton seed oil: Specific gravity, 0.923; iodine number, 110; acid number, 4.—J. Frankl. Inst. 1911, v. 171, p. 60.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 29) report on 3 samples of cotton seed oil, the specific gravity of which varied from 0.923 to 0.9235 and the refractive index from 1.4741 to 1.4745. See also p. 80.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 12) report the following figures: Specific gravity, 0.9230 and 0.9220; saponification value, 192.6 and 195.0; iodine absorbed, 108.6 per cent for one; free fatty acid, calculated as oleic acid, 0.16 to 0.24; refractive index, 1.4732 and 1.4730.

Chisholm, J. C. (U. S. Pat. 1,007,642, Oct. 31, 1911), describes a process of refining crude cotton seed oil.—J. Soc. Chem. Ind. 1911, v. 30, p. 1396.

OLEUM HEDEOMÆ.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 88) report that oil of pennyroyal is by no means so important now as it used to be, having been almost superseded by other oils, especially in the soap making industry. See also Oct. 1911, p. 67.

Pearson, W. A., reports that several lots of oil of pennyroyal were examined which had optical rotations between 20° and 25° . The U. S. P. limit should evidently be raised.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 126. Also Bull. Am. Pharm. Assoc. 1911, v. 6, p. 346.

Smith, Kline & French Co. (Analytical Report, 1911, p. 32) reports that 5 samples of oil of hedeoma were examined. One sample having an optical rotation of $+23^{\circ} 33'$ did not meet the pharmacopœial requirements in this respect.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 55) report that 13 samples of oil of pennyroyal were found to vary in specific gravity from 0.9362 to 0.9411, optical rotation from $+17.16^{\circ}$ to $+21.14^{\circ}$, refractive index from 1.4841 to 1.4846, and pulegone from 76 to 78 per cent, and to be soluble in 2 volumes of 70 per cent alcohol. See also p. 78.

OLEUM JUNIPERI.

Tunmann, O., states that juniper berries are usually obtained from Bavaria, Hungary, Italy, and France, the chief source of supply being Italy.—Apoth.-Ztg. 1911, v. 26, p. 385.

Miller, Adolph W., reports that this year's crop of juniper berries is said to be only one-third of last year's.—Proc. N. W. D. A. 1911, p. 86.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 654) points out that the specific gravity is now given as 0.860 to

0.880, instead of 0.865 to 0.880, and it is required to be soluble in 10 parts of alcohol.

The Committee of Reference in Pharmacy (Third Report, p. 14) describes juniper oil as distilled from the ripe fruit, instead of from the full grown unripe green fruit, as now. Specific gravity, 0.862 to 0.890, increasing with age; optical rotation, -3° to -15° ; refractive index at 25° , 1.472 to 1.488; soluble, when freshly distilled, in 4 volumes of 95 per cent alcohol. See also Pharm. J. 1911, v. 87, p. 591.

Parry, Ernest J., thinks that the monograph for oil of juniper is disappointing. Enormous quantities of carefully prepared turpentine can be added without interfering with the figures given.—Chem. & Drug. 1911, v. 79, p. 450.

Hill and Umney, commenting on the paper by Parry, point out that they have stated (Perf. & Ess. Oil Rec., Sept. 1910, p. 229) that the refractive indices of the higher fractions are of considerable importance, a hint that may be taken note of by the Committee of Reference in Pharmacy in the final revision of the pharmacopœia.—Chem. & Drug. 1911, v. 79, p. 492.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 40) report the following constants observed in 13 samples of apparently genuine oil of juniper: Specific gravity from 0.8649 to 0.8741, optical rotation from -8° to -10.12° , refractive index from 1.4758 to 1.4809, and soluble in 6 to 10 volumes of 90 per cent alcohol. See also p. 77.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 27) report that as a means of distinguishing the genuine juniper berry oil they continue to apply the test proposed by Umney, which consists in observing the refractive index of the residue remaining after distilling off 80 per cent of the oil.

OLEUM LAVENDULÆ FLORUM.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Oct. p. 53) report that the production of the essential oil is lower by 25 per cent than that of last year.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 78) point out that the entire production of lavender oil in the south of France is barely sufficient for the world's requirements, and that an excess of the production over the demand would only be possible if new districts could be opened up to the cultivation of lavender.

Linke, H., reports finding a sample of oil of lavender with a specific gravity of 0.890 at 18° ; ester number, 115, the Ph. Germ. V requirement being at least 84.—Ber. pharm. Gesellsch. 1911, v. 21, p. 193.

Hartwich, C., points out that the Ph. Germ. V assay for oil of lavender is not in harmony with the requirements for the assay of

alkaloids. He thinks that 29.3 per cent of linalyl acetate is low; the Ph. Helv. and Ph. Ndl. require 35 per cent.—Apoth.-Ztg. 1911, v. 26, p. 45. See also Pharm. J. 1911, v. 86, p. 654, and Chem. & Drug. 1911, v. 78, p. 230.

Schimmel & Co. (Semi-Annual Report, Apr., 1911, p. 128), in discussing the Ph. Germ. V requirements for oil of lavender, point out that the time of saponification, according to the general directions of the Pharmacopœia, is 15 minutes; in certain conditions this time is insufficient for the quantitative saponification of this oil.

They also (p. 132), in commenting on the Ph. Russ. VI, point out that this oil is soluble in any proportion of 90 per cent alcohol.

An unsigned abstract (Oil & Color Tr. J.) notes that the Ph. Ross. gives the minimum ester value for lavender oil at 29 per cent. This excludes some of the very finest Italian frontier oil, which contains down to 25 per cent of esters, but is about the sweetest foreign lavender oil distilled.—Am. Perf. 1911-12, v. 6, p. 155.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, p. 110) point out that the Ph. Ndl. IV maximum limit of specific gravity of oil of lavender which was previously 0.890 has been raised to 0.895.

The Committee of Reference in Pharmacy (Third Report, p. 14) describes lavender oil as from lavender cultivated in England, France, and other countries. Specific gravity, 0.883 to 0.900; optical rotation, -3° to -10° ; soluble in 3 volumes of 70 per cent alcohol (as now); the English oil to contain 7 to 11 per cent of esters, and the foreign not less than 30 per cent, calculated as linalyl acetate.—See also Pharm. J. 1911, v. 87, p. 591.

Parry, Ernest J., thinks that the 30 per cent minimum of esters for foreign lavender oil excludes some genuine high-grade samples. He thinks a test for artificial esters should be included, if practicable, as this is now a most common form of adulteration.—Chem. & Drug. 1911, v. 79, p. 450.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Oct. pp. 88-90) present a review of recent literature on linalool and oil of lavender.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 41) report the following variations in the constants of 21 samples of oil of lavender of foreign origin: Specific gravity, 0.8886 to 0.8984; optical rotation, -3.42° to 7.14° ; refractive index, 1.4612 to 1.4642; soluble in 2 to 4 volumes of 70 per cent alcohol; and apparent linalyl acetate 27.8 to 37.2 per cent. See also p. 77.

OLEUM LIMONIS.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Oct. p. 58) report that although the new crop of oil of lemon promises to be slightly better than that of last year, it is not destined to lead to any considerable improvement of the market situation. See also *Ibid.* Apr. pp. 63-64.

Rippetoe and Wise discuss the pharmacopœial assay of citral in oil of lemon and recommend that the Hiltner method be further studied and, if possible, substituted for the pharmacopœial sulphite method now in use.—*Am. J. Pharm.* 1911, v. 83, pp. 558–562.

Hartwich, C., in commenting on the Ph. Germ. V requirements for oil of lemon, expresses the belief that fractional distillation should be required in connection with the several tests.—*Apoth.-Ztg.* 1911, v. 26, p. 45.

See also *Pharm. J.* 1911, v. 86, p. 654, and *Chem. & Drug.* 1911, v. 78, p. 230.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 128) in discussing the Ph. Germ. V requirements for lemon oil, point out that the waxlike constituents fail to dissolve in 12 parts of alcohol.

They also (*Ibid.* p. 132) point out that the Ph. Ross. VI limit of specific gravity is so wide that most adulterated oils would answer the requirements; the specific gravity of pure oil ranges from 0.857 to 0.861 at 15°.

An unsigned abstract (Oil & Color Tr. J.) notes that the specific gravity of lemon oil according to the Ph. Ross. is 0.855, which is a clear indication of adulteration. Any oil with a specific gravity below 0.857 is to be regarded with grave suspicion.—*Am. Perf.* 1911–12, v. 6, p. 155.

The Committee of Reference in Pharmacy (Third Report, p. 15; Supplementary Report, p. 2) proposes for lemon oil the specific gravity, 0.857 to 0.860 (as now); optical rotation, +58° to +64°; refractive index at 25°, 1.474 to 1.476; to contain at least 3.5 per cent of citral, the latter to be determined by Bennett's hydroxylamine process. See also *Pharm. J.* 1911, v. 87, p. 591.

Parry, Ernest J., is unable to see the point of recommending a minimum of 3.5 per cent of citral, while at the same time stating that the merits of the various processes for the determination of citral in lemon oil are at present under investigation.—*Chem. & Drug.* 1911, v. 79, p. 450. See also p. 159 and p. 523.

Hill and Umney, commenting on the paper by Parry, note that they have stated (*Perf. & Ess. Oil. Rec.* Sept. 1910, p. 229) that they give preference, after careful trial, to A. H. Bennett's hydroxylamine process. Determined by this process, 3.5 per cent is a desirable citral minimum for the Ph. Brit. monograph.—*Ibid.* p. 492.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 67) report that the new crop of lemon oil shows a low optical rotation, with the result that oils of 57 to 59° are very frequent. The citral content of the lemon oil this season appears to be fractionally smaller than in the season before. See also p. 27.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 43) report the following range observed in 30 samples of genuine oil of

lemon: Specific gravity from 0.8566 to 0.8596; optical rotation, $+57.52^{\circ}$ to $+62.46^{\circ}$; refractive index, 1.4735 to 1.4756; and a citral content 4 to 4.75 per cent. See also p. 78.

OLEUM LINI.

Wilcox, Levi, reports that about 50,000,000 gallons of linseed oil were produced during the season 1910-11, which, with the 4,000,000 gallons of oil imported from abroad, gave an available supply of 54,000,000 gallons of linseed oil. Under normal conditions not less than 65,000,000 gallons would be consumed in the United States. The domestic production of flaxseed was the smallest since 1894.—Proc. N. W. D. A. 1911, p. 110.

Rosenthaler, L., points out that the Ph. Germ. V requires that linseed oil should not congeal above -20° . The lower limit of specific gravity has also been reduced from 0.936 to 0.930. The iodine number has been raised from 168 to 176, in place of 150 in the Ph. Germ. IV.—Pharm. Zentralh. 1911, v. 52, p. 14.

Hartwich, C., notes that the Ph. Germ. V requires that oil of linseed have an iodine number of 168 to 176. Other pharmacopœias, particularly the Ph. Helv., require as high as 200.—Apoth.-Ztg. 1911, v. 26, p. 45.

See also Pharm. J. 1911, v. 86, p. 654, and Chem. & Drug. 1911, v. 78, p. 260.

The Committee of Reference in Pharmacy (Third Report, p. 15) omits the requirement that linseed oil be expressed at ordinary temperatures. Specific gravity, 0.930 to 0.940 (as now); saponification value, 187 to 195; iodine value, not below 170; acid value, not over 3.0; unsaponifiable matter, less than 1 per cent; refractive index at 40° , 1.4725 to 1.4748; a color test for rosin and resin oils is introduced. See also Pharm. J. 1911, v. 87, p. 591.

Jensen, Harold R., discusses the analytical examination of linseed oil, with tabulated statement of results.—Pharm. J. 1911, v. 86, p. 839.

Ingle, Harry, contributes some brief notes on linseed and other oils.—J. Soc. Chem. Ind. 1911, v. 30, p. 344.

Rollett, Adolf, replies to the criticisms made by Erdmann and Bedford on his determination of linolenic acid in oil of linseed.—Ztschr. physiol. Chem. 1910-11, v. 70, pp. 404-407.

See also Erdmann, E., *Ibid.* v. 74, pp. 179-197.

Gardner, Henry A., in a communication on the value of certain paint oils, gives the following constants for linseed oil: Specific gravity, 0.934; iodine number, 188; acid number, 3; saponification number, 191.—J. Frankl. Inst. 1911, v. 171, pp. 55-72. See also Chem. Eng. 1911, v. 13, pp. 112-117, and J. Ind. & Eng. Chem. 1911, v. 3, pp. 628-629.

Roch differentiates between drying oils and nondrying oils, and comments on the chemistry of the drying of oils.—*Ztschr. ang. Chem.* 1911, v. 24, pp. 80–81.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 14) again record that adulterated linseed oil is not infrequently offered. The genuine oils examined had a specific gravity of 0.9310 to 0.9340; saponification value, 191.6 to 195.6; iodine absorbed, 177.7 to 193.8; refractive index, 1.4805 to 1.4830. The 2 abnormal oils gave the following results: Specific gravity, 0.9303 and 0.9315; saponification value, 182.3 and 194.5; iodine absorbed, 172.4 and 150.6; refractive index, 1.4819 and 1.4778.

Dunlap, Renick W., reports that of 20 samples of raw linseed oil examined 8 were not passed.—Rep. Ohio Dairy & Food Com. 1910–11, p. 50.

OLEUM MENTHÆ PIPERITÆ

The Chemist and Druggist (1911, v. 78, p. 369) states that the Japanese exports of peppermint oil amounted to 103,906 kin in 1908, 151,801 in 1909, and 141,127 in 1910.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, p. 67) present a table showing the plantations and stocks of oil of peppermint in several sections of the United States. They point out that the peppermint oil industry in the State of New York has practically ceased to exist. See also Apr. 1911, p. 89.

Henderson, H. John, in the report of an experiment in peppermint culture, presents tables showing the amount of yield and the nature of the oil obtained.—Year-Book of Pharmacy, 1911, p. 430.

Hartwich, C., in discussing the Ph. Germ. V requirement for oil of peppermint, points out that while the pharmacopœia limits the drug to the leaf of *Mentha piperita* L. it permits the oil being distilled from closely related species. He points out that the pharmacopœial constants practically exclude the English oil and would also exclude many samples of German, American, and French oils.—Apoth.-Ztg. 1911, v. 26, pp. 45–46.

See also Pharm. J. 1911, v. 86, p. 654, and Chem. & Drug. 1911, v. 78, p. 260.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 129), in discussing the Ph. Germ. V requirements for peppermint oil, point out that the proviso which includes as official the oil of other *Mentha* species, provided it possesses the properties required by the pharmacopœia, is very sound.

They also (*Ibid.* p. 132) note that the Ph. Russ. VI requirement regarding solubility applies particularly to American peppermint oil.

The Committee of Reference in Pharmacy (Third Report, p. 15) proposes for peppermint oil the specific gravity, 0.900 to 0.920 (as

now); optical rotation, -20° to -35° ; soluble in 4 volumes of 70 per cent alcohol (as now); to contain not less than 50 per cent of total menthol and not less than 5 per cent of esters calculated as menthyl acetate. See also *Pharm. J.* 1911, v. 87, p. 591.

An editorial (*Chem. & Drug.* 1911, v. 79, p. 647) states that in view of the fact that the United States is such a large producer of peppermint oil, it might have been thought that efforts would be made to produce menthol also while the price rules so high. This would, of course, necessitate a more complicated process than simple freezing out, but the present price should well repay the extra trouble.

Miller, Adolph W., points out that only the purified oil of peppermint will comply with the tests of the U. S. P. and that strictly pure natural oil of peppermint cannot be sold under the simple name oil of peppermint, as it does not comply with all of the tests given in the U. S. P.—*Proc. N. W. D. A.* 1911, pp. 95–96.

Camus and Camus present a study of the analytical characters of the essential oils of the ordinary and the red peppermints.—*Roure-Bertrand Fils, Sc. & Ind. Bull.* 1911, Oct. pp. 36–38.

Bourdet, L., contributes a note on the physical assay of certain Italian mint oils.—*Bull. sc. pharmacol.* 1911, v. 18, pp. 392–395.

Maisit, J., reports on a sample of peppermint oil from the Caucasus. He finds that the properties of the oil from the first and second year plants are practically identical, though the menthol ester content in the second-year plant is somewhat higher.—*Arch. Pharm.* 1911, v. 249, pp. 637–640.

Irk, Karl, reports a study of Hungarian oil of spearmint and presents tables showing the chemical and physical constants observed.—*Pharm. Zentralh.* 1911, v. 52, pp. 1111–1114.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 56) report the following variations in the constants observed in 5 samples of genuine Mitcham oil: Specific gravity, 0.9057 to 0.9115; optical rotation, -27.4° to -29.12° ; refractive index, 1.4595 to 1.4615; total menthol, 59.8 to 66.7 per cent; and menthyl acetate 6.9 to 8.9 per cent. One sample only yielded the equivalent of 1 per cent menthone, by absorption. All were soluble in 3 to 4 volumes of 70 per cent alcohol. See also p. 78.

Southall Bros. & Barclay (*Rep.* 1911, Birmingham, 1912, p. 29) report the following variations observed in American oil of peppermint: Specific gravity, 0.906 to 0.913; menthyl acetate, 9.13 to 10.92 per cent; free menthol, 56.24 to 63.02 per cent; refractive index, 1.4610 to 1.4640.

Herdman, Ronald T., reports successful results from the use of *oleum menthæ piperitæ* instead of menthol for coryza.—*Brit. M. J.* 1911, v. 2, p. 72.

OLEUM MENTHÆ VIRIDIS.

Holmes, E. M. (Perf. & Ess. Oil Rec.), presents a paper on oil of spearmint, with illustrations of the leaves of *Mentha viridis* and *Mentha cardiaca*.—Brit. & Col. Drug., 1911, v. 60, p. 272.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, p. 84) report that, in the States of Michigan and Indiana, 1,727 acres are under spearmint and that more than one-half of this, viz, 921 acres, represents new plantations.

They also (*Ibid.* Apr. 1911, p. 133), in discussing the Ph. Ross. VI requirements for spearmint oil, point out that the dilute solution of spearmint oil in 90 per cent alcohol has an opalescent turbidity.

The Committee of Reference in Pharmacy (Third Report, p. 16) proposes for oil of spearmint the specific gravity, 0.925 to 0.940 (as now); optical rotation, -30° to 50° ; soluble in 1 volume of 80 per cent alcohol, and in 3 volumes of 90 per cent. See also Pharm. J., 1911, v. 87, p. 591.

Smith, Kline & French Co. (Analytical Report, 1911, p. 33) report that 2 samples of oil of spearmint were found to be of U. S. P. quality with the exception that one had an optical rotation 3° above the upper limit of the U. S. P.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 66) report that 2 samples of spearmint oil gave a specific gravity of 0.9317, 0.9360; an optical rotation, -34.48° , -51.30 ; refractive index, 1.4823, 1.4892; and were soluble in 0.75 to 1 volume of 80 per cent alcohol. See also p. 79.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 106) state that, judged by European standards of taste, it seems scarcely credible that the employment of this oil in the manufacture of sweets, chewing gum, etc., should be steadily increasing in the United States.

OLEUM MORRHUÆ.

An unsigned article discusses the manufacture of cod liver oil.—Montreal Pharm. J. 1911, v. 22, pp. 167-169.

An editorial note (Pharm. J. 1911, v. 87, p. 124) gives a statistical table showing the improvement in the value of cod liver oil in 1902 to 1911.

See also Gehe & Co., Handelsbericht, 1911, p. 90.

An editorial note (Brit. & Col. Drug. 1911, v. 59, p. 210) presents a brief summary of the cod liver oil outlook, with charts depicting the relative value of cod liver oil this and last season to date and the minimum and maximum in the weekly range of quotations.

Hartwich, C., points out that the Ph. Germ. V description for cod liver oil requires an iodine number of 155 to 175, and compares this requirement with the limits prescribed in other pharmacopœias

which vary from a minimum of 120 in the Ph. Austr. to a maximum of 182 in the Ph. Ndl., the differences in results being probably due to the length of time that the iodine is allowed to act on the oil.—Apoth.-Ztg. 1911, v. 26, p. 45.

See also Pharm. J. 1911, v. 86, p. 654; and Chem. & Drug. 1911, v. 78, p. 230.

Rosenthaler, L., points out that the specific gravity of cod liver oil according to the Ph. Germ. V should be 0.924 to 0.932, iodine number 165 to 175, and saponification number 184 to 196.6.—Pharm. Zentralh. 1911, v. 52, p. 14.

Linke, H., reports finding a sample of cod liver oil well within the Ph. Germ. V limits of saponification number 184 to 196.6; iodine number 155 to 175.—Ber. pharm. Gesellsch. 1911, v. 21, p. 194.

The Committee of Reference in Pharmacy (Third Report, p. 16) raises the temperature of extraction to 85°, and recommends specific gravity, 0.920 to 0.930 (as now); saponification value, 179 to 192; iodine value, 155 to 173; acid value, not above 2.5; unsaponifiable matter, not over 1.5 per cent; refractive index at 40°, 1.4704 to 1.4745; freezing test extended from 2 hours to 3 hours; a color test is added. See also Pharm. J. 1911, v. 87, p. 591.

Louise, E., contributes an article on a new method of analysis, by curves of miscibility, and its application to the assay of cod liver oil.—J. Pharm. et Chim. 1911, v. 3, pp. 377–385.

Pearson, W. A., reports that several samples of cod liver oil were examined which had saponification numbers slightly above U. S. P. limits.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 125. Also Bull. Am. Pharm. Assoc. 1911, v. 6, p. 346.

Smith, Kline & French Co. (Analytical Report, 1911, p. 33) report on 10 samples of cod liver oil. The majority of these samples were higher in saponification value than 185, allowed by the U. S. P. The U. S. P. requires an iodine number not less than 140. The samples examined had iodine numbers from 136 to 153.4.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 23) report on 50 samples of medicinal cod liver oil, the specific gravity of which varied from 0.926 to 0.929, the refractive index from 1.4803 to 1.4827, the saponification value from 182 to 193.2, and iodine value from 159 to 167.5. Four adulterated oils had a specific gravity of from 0.9075 to 0.9327, a refractive index from 1.4726 to 1.483, a saponification value from 146.3 to 189, and an iodine value from 99.4 to 138.8.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 10) report that the following figures are typical for "A1" oil of the season 1910–11: Specific gravity, 0.9265; saponification value, 187.7; iodine absorbed, 168.0 per cent; unsaponifiable matter, 1.11 per cent; refractive index, 1.4791; free fatty acid (as oleic acid), 0.26 per cent; color reactions normal.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that this valuable medicament frequently has a disagreeable taste, sometimes acrid. The industrial extraction of the oil is not made in the most desirable surroundings.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 230; also J. Pharm. Anvers, 1911, v. 67, p. 518.

Diner, Jacob, states that for the palatable presentation of cod liver oil there is no better extemporaneous method than the emulsification with acacia and disguising the taste and odor with any of the essential oils of the U. S. P.—Drug. Circ. 1911, v. 55, p. 293.

Kopp, Frederick, states that one of the primary symptoms of *oleum jecoris aselli* is an expectoration of greenish-yellow phlegm, of a tough character, and having a saltish taste. Its secondary symptoms are a white expectoration, of a thick character, accompanied with a pain in the side, and a hard cough.—Hahnemann. Month. 1911, v. 46, pp. 635-636.

OLEUM MYRISTICA.

Hartwich, C., points out that the Ph. Germ. V description of *oleum macidis* permits the use of either oil of mace or the oil of nutmeg, and that while the commercial practice appears to permit of the use of either of these oils, this is not compatible with a strictly scientific definition. He notes that the two oils have distinct properties and could readily be differentiated.—Apoth.-Ztg. 1911, v. 26, p. 45.

See also Pharm. J. 1911, v. 86, p. 654, and Chem. & Drug. 1911, v. 78, p. 260.

The Committee of Reference in Pharmacy (Third Report, p. 16) proposes for nutmeg oil the specific gravity, 0.870 to 0.925; optical rotation, $+13^{\circ}$ to $+30^{\circ}$; refractive index at 25° , 1.474 to 1.484; soluble in 3 volumes of 90 per cent alcohol; not more than 5 per cent of residue to be left when the oil is evaporated on a water bath. See also Pharm. J. 1911, v. 87, p. 592.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 52) give the following variations in the constants observed in 4 genuine samples of oil of nutmeg: Specific gravity from 0.8715 to 0.9073, optical rotation from $+21.12$ to $+37.18^{\circ}$, and soluble in 1.25 to 3.25 volumes of 90 per cent alcohol. The residue in 1 case was excessive (1.7 per cent), and 2 of the oils had abnormally high rotations.—See also p. 78.

OLEUM OLIVÆ.

Chapelle, M., summarizes a new process for the extraction of olive oil, which has the advantages of being rapid, collecting all the oil contained in the fruit, and of rendering it perfectly limpid and marketable without further working.—Am. Perf. 1911-12, v. 6, p. 183.

Brun, J. (Fr. Pat. 428,349, Apr. 5, 1911), describes an apparatus for extracting oil from olives and other substances by means of water.—J. Soc. Chem. Ind. 1911, v. 30, p. 1170.

An unsigned article (*Chem. & Drug*. 1911, v. 79, p. 391) gives an interesting sketch of the first steps made in France in the line of cooperation in the production of olive oil.

A news note (*Oil, Paint, and Drug Reporter*, 1911, v. 80, July 10, p. 40) states that the Spaniards now control the trade in olive oil, and that the cultivation of the olive constitutes one of the most valuable and extensive industries in Spain.

Morgan, Henry H., reports that the exports of olive oil from Spain during 1909 amounted to 54,466,318 pounds.—*Cons. & Tr. Rep.*, July 5, 1911, p. 57.

Gehe & Co. (*Handelsbericht*, 1911, pp. 93–95) present tables showing the production of olive oil in Italy for the years 1907–1910, inclusive.

The *Chemist and Druggist* (1911, v. 78, p. 415) notes the heavy increase in the tonnage of Italian olive oil diverted to the United States, amounting to 13,843 tons in 1910, as compared with 8,233 for 1909.

The *Marseilles Correspondent* (*Chem. & Drug*. 1911, v. 78, p. 261) discusses the olive oil crop of the past year.

Wilson, R. C., reports that a good many samples labeled "Sweet oil" were found to be cotton seed oil.—*Proc. Georgia Pharm. Assoc.* 1911, p. 35.

A news note (*Oil, Paint, and Drug Reporter*, 1911, v. 79, Feb. 13, p. 28F) points out that salad oil must in the future be olive oil and nothing else, unless the other constituents are prominently named on the labels.

A news note (*Brit. Food J.* 1911, v. 13, p. 200) reports a sample of oil marked "Olive oil," which on examination was found to consist of cotton seed oil.

Rosenthaler, L., points out that the upper limit of the iodine number of olive oil has been raised from 84 to 88. The Halphen reaction for cotton seed oil has been included, and the Soltsien reaction for sesame oil.—*Pharm. Zentralh.* 1911, v. 52, p. 14.

Linke, H., notes that the Ph. Germ. V limitation of acid number and iodine number is complied with only by samples of unusually good quality.—*Ber. pharm. Gesellsch.* 1911, v. 21, p. 194.

Hartwich, C., states that the Ph. Germ. V requirement for olive oil limits the iodine number to from 80 to 88, evidently intending to provide for the oil of the olive kernel which frequently has an iodine number of 88.—*Apoth.-Ztg.* 1911, v. 26, p. 46.

See also *Pharm. J.* 1911, v. 86, p. 654, and *Chem. & Drug*. 1911, v. 78, p. 260.

Serger, H., calls attention to the several reactions characteristic of olive oil.—*Chem. Ztg.* 1911, v. 35, p. 611.

The Committee of Reference in Pharmacy (Third Report, p. 16) proposes for olive oil the specific gravity, 0.915 to 0.918; saponifica-

tion value, 188 to 197; iodine value, 79 to 87; acid value, not over 60; refractive index at 40°, 1.4605 to 1.4635. Halphen's test for cottonseed oil replaces the present test with silver nitrate; tests are introduced for sesame, arachis, and other oils. See also *Pharm. J.* 1911, v. 87, p. 592.

An unsigned note (*Répert. pharm.* 1911, v. 23, p. 414; see also p. 436) calls attention to the Italian demand for a pale, limpid olive oil, and describes a method of decoloration by means of tannic acid.

Crouzel, Ed., presents a brief note on the decoloration of olive oil.—*Ann. chim. analyt.* 1911, v. 16, p. 420.

See also *Ann. falsif.* 1911, v. 4, p. 355, and *Drug Topics*, 1911, v. 26, pp. 337-338.

Pearson, William A., states that the idea is prevalent that most olive oil is largely or wholly cottonseed oil. It is true that it is not all the finest flavor or equally desirable, but the number of samples actually adulterated with cottonseed oil is remarkably small.—*Hahne-mann. Month.* 1911, v. 46, p. 567.

A news note (*Brit. Food J.* 1911, v. 13, p. 218) reports that the defendant, on trial for selling adulterated olive oil, made the claim that the package was labeled "Lucca oil," and asserted that monkey-nut oil was frequently sold under this designation. He also made the claim there were three Luccas—one in Italy, one in Sicily, and one in Jamaica.

Archbutt, L., presents a brief paper on some characteristics of neutralized olive residuum oils.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 5.

A news note (*Brit. Food J.* 1911, v. 13, p. 19) reports a sample of olive oil which was found to contain 90 per cent of foreign oil, probably arachis oil.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 53) report the following range for all qualities of 72 samples of olive oil examined by them: Specific gravity from 0.9155 to 0.917; refractive index, 1.470 to 1.4712; iodine value from 80.2 to 87.9; and free acid from 0.7 to 4.6 per cent. See also p. 81.

Guarnieri, S. (*Staz. Sper. Agr.* 1909, p. 387), reviews the tests for oil of sesame in olive oil.—*Schweiz. Wchnschr. Chem. u. Pharm.* 1911, v. 49, p. 298.

Parry, E. J., thinks the best available qualitative test for arachis oil in olive oil is that of Bellier, a slight modification of which he details.—*Chem. & Drug.* 1911, v. 78, p. 490.

Maroille, R., reports on 550 samples of olive oil from Tunis. The iodine number was found to vary from 87 to 92.5. The majority of the oils contained less than 1 per cent of free acid.—*Pharm. Zentralh.* 1911, v. 52, p. 267.

Cutolo, A. (*Giorn. Farm. Chim.* 1910, 59, 530; *Chem. Zentralbl.* 1911, 1, 415), states that mineral oil, tinted with methylazodimethyl-

aniline, is recorded from Italy as an adulterant of olive oil.—Pharm. J. 1911, v. 86, p. 333.

Bernegau, L. H., reports that of 7 samples of olive oil examined all answered U. S. P. requirements as to specific gravity, iodine value, and saponification number, but failed to respond to the U. S. P. requirements on treatment with nitric acid.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 126.

Street, John Phillips, reports that the olive oil sold by druggists in his State has been inspected six times, while a slight improvement in purity has been found this year, that sold by grocers as a rule is shown to be of greater purity. No adulterated olive oil was found in grocers' stocks from 1905 to 1908. The results of the inspection of druggists' samples are shown below:

	Not found adulterated.	Adulterated.	Per cent adulterated.
1897.....	13	5	27.8
1900.....	17	13	43.3
1905.....	21	9	30.0
1906.....	55	11	16.7
1907.....	65	11	14.5
1908.....	63	10	12.7

—Rep. Connecticut Agric. Exper. Sta. for 1910–11, pp. 570–572.

Table showing some of the analytical results reported for olive oil.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Lythgoe, Hermann C.....	81	16	Rep. Massachusetts Bd. Health.
Alvino, L.....	22	13	Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 260-261
Howard, Charles D.....	14	1	New Hampshire San. Bull. 1911, v. 3, p. 266.
Do.....	7	3	Ibid. No. 14, p. 280.
Street, John Phillips.....	74	10	Rep. Connecticut Agric. Exper. Sta. for 1910-11, p. 581. See also pp. 570-572.
Mass. Bd. Health.....	6	2	Monthly Bulletin, 1911, p. 39.
Southall Bros. & Barclay.....	100	3	Rep. 1911, Birmingham, 1912, p. 16.

Notices of Judgment Nos. 710, 783, 819, 915, 916, 953, 997, 1062, and 1155, under the food and drugs act, deal with the adulteration and misbranding of olive oil.

Dewey, W. A., asserts that olive oil is one of the best general antidotes to poisoning.—Hahnemann. Month. 1911, v. 46, p. 631.

Crump, Walter Gray, contributes an article on a new oil treatment of postoperative abdominal adhesions, with tabulated list of the free fatty acid determination in a number of samples.—J. Am. Inst. Homœop. 1911, v. 3, pp. 779–785.

Hyde, C. R., thinks that the use of olive oil to lessen and even control postoperative nausea has not received the attention of surgeons that its success warrants. He outlines his method of administration.—J. Am. M. Assoc. 1911, v. 56, p. 1505.

Riedel's Berichte (1911, p. 99) quotes Graham, who recommends the administration of olive oil in the treatment of vomiting following ether narcosis.

Additional references on the chemistry, pharmacology, and therapeutic uses of olive oil will be found in Index Med.; J. Am. M. Assoc.; Chem. Abstr.; Exper. Sta. Rec.; and Chem. Centralbl.

OLEUM PIOIS LIQUIDÆ.

Smith, Kline & French Co. (Analytical Report, 1911, p. 34) reports that 8 samples of oil of tar were examined. All were considerably above the upper limit for specific gravity specified by the U. S. P.

OLEUM PIMENTÆ.

The Committee of Reference in Pharmacy (Third Report, p. 17) proposes for oil of pimento the specific gravity, 1.030 to 0.055; optical rotation, 0° to -4° ; refractive index at 25° , 1.508 to 1.535; soluble in 3 volumes of alcohol; to show not less than 60 per cent by volume of eugenol by the potash test. See also Pharm. J. 1911, p. 592.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 57) report the following constants for 1 sample of pure oil of pimento: Specific gravity, 1.039; optical rotation, -1.4° ; refractive index, 1.5317; and eugenol content, 63.5 per cent. See also p. 79.

OIL OF PINE NEEDLE.

Craig, Hugh, questions as to which variety of pine needle oil was meant to be included in the U. S. P.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 607.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 96) state that the exquisite pine needle oil has conquered the attention of consumers by storm, on account of its pleasant odor, its low price, and the small quantity required to produce a result. See also Oct. 1911, p. 72.

Grimme, C., contributes a paper on the oils of the seeds of coniferæ, with a tabulated statement of analytical results obtained.—Pharm. J. 1911, v. 87, p. 494.

The Committee of Reference in Pharmacy (Third Report, p. 17) describes oil of pine as distilled from the fresh leaves of *Abies sibirica*, and proposes a specific gravity of 0.900 to 0.920; optical rotation, -32° to -42° ; refractive index at 25° , about 1.474; to contain from 30 to 40 per cent of esters, calculated as bornyl acetate. The Committee recommends the substitution of this oil for that of *Pinus pumilio* Haenke. See also Pharm. J. 1911, v. 87, p. 592.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 133), discussing the Ph. Ross. VI requirements for pine needle oil, point out that as the oil distilled from the needles of the common pine, *Pinus silvestris* L. has a somewhat unpleasant odor, and is difficult to procure in commerce, and as, moreover, the term *oleum pini silvestris* is an old and incorrect denomination for oil from the cones of *Abies alba* ("Templinol"), it would be more correct to prescribe *Oleum templini*, of which the specific gravity ranges from 0.851 to 0.870.

Smith, Kline & French Co. (Analytical Report, 1911, p. 29) reports that 7 samples of oil of pine needles were examined. The constants of 1 sample resembled closely those of the Siberian variety. The remaining samples were probably obtained from *Pinus silvestris*.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 57) report the following variations in the constants observed in 5 samples of Siberian pine oil: Specific gravity, 0.9137 to 0.9283; optical rotation, -40.4° to $[\eta]$; refractive index, 1.4695 to 1.4716; and bornyl acetate content 37.3 to 40.66 per cent. See also p. 79.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 30) note that 2 samples of oil of *Pinus sibirica* showed bornyl acetate in excess of the minimum standard recommended. Two samples of the oil of *Pinus pumilio* showed somewhat marked variation in the proportion of esters present.

OLEUM RICINI.

Tunmann, O., states that the castor oil plant, which is probably indigenous to tropical Africa, is now cultivated in a great number of countries. The perennial form of the plant grown in India furnishes a widely used oil, but the greater portion of the medicinal oil is obtained from the annual form of the plant. The chief market for castor oil seed is Marseilles.—Apoth.-Ztg. 1911, v. 26, p. 579.

Fourie, P. J. (J. Roy. Soc. Arts), discusses castor oil production in South Africa, where the demand is practically unlimited.—Pharm. J. 1911, v. 87, p. 396.

Gomez, G. (Estac. Agr. Cent. [Mexico] Bol, 28, pp. 28, pls. 4), presents a description of the methods of producing castor oil in Mexico.—Exper. Sta. Rec. 1911, v. 24, p. 613.

An unsigned article (Bull. Imp. Inst. 1911, v. 9, pp. 17-35) discusses the cultivation, production, preparation, and utilization of castor seed.

Hartwich, C., in commenting on the Ph. Germ. V requirement for castor oil, points out that the provision that the cold process oil be boiled with water is designed to remove the toxic ricin.—Apoth.-Ztg. 1911, v. 26, p. 46.

The Committee of Reference in Pharmacy (Third Report, p. 18) proposes for castor oil the specific gravity, 0.958 to 0.970; saponification value, 177 to 187; iodine value, 83 to 90; acid value, not over

4.0; refractive index at 40°, 1.4695 to 1.4730. Soluble in all proportions of absolute alcohol and in 3.5 volumes of 90 per cent alcohol. The test for other fixed oils by means of the solubility in petroleum spirit is made a little more precise and a little more stringent. The test for cotton seed oil and some others by means of carbon disulphide and sulphuric acid is omitted. See also *Pharm. J.* 1911, v. 87, p. 592.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 19) report that 80 samples of castor oil showed a refractive index from 1.4795 to 1.4812, 0.3 to 1.4 per cent of free acid, and an iodine value of from 84.6 to 86.1. See also p. 80.

Southall Bros. & Barclay (*Rep.* 1911, Birmingham, 1912, p. 9) report that the examination of some 23 samples of medicinal castor oil has given the following results: Specific gravity, 0.960 to 0.966; saponification value, 178.5 to 184.5; refractive index, 1.4784 to 1.4803.

Twombly, Earl M., finds that the best method for removing the odor and taste of castor oil is by washing a cold pressed oil several times with boiling water. After separating the oil is filtered cold very slowly through a thick layer of powdered animal charcoal. Any effort to quicken the method gives poor results.—*The Apothecary*, June, 1911, v. 23, p. 16.

An unsigned article (*Fol. Therap.* 1911, v. 5, pp. 59–60) calls attention to the production of castor oil in the form of powder by mixing the oil with magnesia as an excipient.

Diner, Jacob, states that for the palatable presentation of castor oil there is no better extemporaneous method than emulsification with acacia and disguising the taste and odor with any of the essential oils of the U. S. P.—*Drug. Circ.* 1911, v. 55, p. 293. See also *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 342.

An unsigned abstract (*Rev. int. Méd. et Chir.*) discusses the administration of castor oil.—*Bull. sc. pharmacol.* 1911, v. 18, Annexes, p. 138.

Robinson, Beverley, states that castor oil is of infinite value in many instances of intestinal disorder.—*Critic and Guide*, 1911, v. 14, p. 338.

Kopp, Frederick, states that *oleum ricinus communis* should not be lost sight of in the first stage of dysentery, when there is a frequent desire and urging, or the evacuations are in the form of small hard balls, and there is but little mucus or blood—*Hahnemann. Month.* 1911, v. 46, pp. 635.

Leftwich, R. W., states that the reason for his advocacy of castor oil for the preservation of the hair is the fact that it is practically the only oil that will dissolve in spirit (1 in 3.5). It has a tendency to mat the hair unless dissolved in spirit.—*Pharm. J.* 1911, v. 86, p. 453.

Krausz, Moritz, discusses the reversibility of the enzyme action of ricinus.—Ztschr. ang. Chem. 1911, v. 24, pp. 829–831.

Additional references on the use of castor oil will be found in J. Am. M. Assoc., and Index Med.

OLEUM ROSÆ.

An editorial (Chem. & Drug. 1911, v. 79, p. 244) gives the official statistics with reference to the export and average price of Bulgarian oil of rose from 1900 to 1910.

Gehe & Co. (Handelsbericht, 1911, p. 95) state that the amount of oil of rose produced in Bulgaria was 2,560 kilos in 1910, against 3,905 kilos in 1909.

An unsigned article (New Idea, 1911, v. 33, p. 213) states that the process of distillation in Bulgaria is in the main extremely crude and more or less wasteful.

Schimmel & Co. (Semi-Annual Report, Apr. pp. 97–100) comment on the economic condition of the oil of rose market, and present a table giving the distribution of the rose oil industry in Bulgaria in the years 1909 and 1910.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Apr. p. 74) report that the French rose industry is in a somewhat critical position, the harvest of 1909 and that of 1910 were both reduced in consequence of frost.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, pp. 74–77) review the economic conditions of the oil of rose market and present a table showing the production of pure rose oil arranged according to localities.

They also (*Ibid.* Apr. 1911, p. 129), in discussing the requirements of the Ph. Germ. V for oil of rose, point out that the rotation of rose oil is often above the limit given; they have observed up to -4.20° .

Rosenthaler, L., points out that the Ph. Germ. V requirements for oil of rose exclude the German product, which is frequently slightly dextrorotatory. He also points out that the upper limit of the congealing point has been reduced to 20° in place of 21° formerly permitted.—Pharm. Zentralh. 1911, v. 52, p. 16.

See also Pharm. J. 1911, v. 86, p. 654, and Chem. & Drug. 1911, v. 78, p. 260.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 133), discussing the Ph. Ross. VI requirements for rose oil, point out that this oil is never colorless, but always yellowish. Seeing that owing to the separation of paraffin, the oil is usually in a solid condition at $+15^{\circ}$, it is advisable to determine the specific gravity at a higher temperature: $30/15^{\circ}$, 0.849 to 0.863. Oil of rose solidifies at a higher temperature than that indicated.

An unsigned abstract (Oil & Color Tr. J.) notes that the Ph. Ross. specific gravity for otto of rose is 0.890 at 15°. Any otto of rose with this higher gravity must of necessity contain about 50 per cent of added geraniol or similar substances.—Am. Perf. 1911-12, v. 6, p. 155.

The Committee of Reference in Pharmacy (Third Report, p. 18) proposes for oil of rose the specific gravity at 30°, referred to water at 15.5°, 0.854 to 0.862; optical rotation, -2° to -4° ; refractive index at 25°, 1.456 to 1.465; melting point, 20° to 22.5° . See also Pharm. J. 1911, v. 87, p. 592.

An unsigned note (Chem. & Drug. 1911, v. 79, p. 348) states that the examination of a few samples of new crop Bulgarian otto of roses of undoubted purity has given the following characters: Specific gravity at 30°, 0.856 to 0.858; optical rotation, -3° to -3.45° ; refractive index at 20°, 1.4620 to 1.4640; melting point, 21° to 22.5° ; ethyl alcohol absent; total alkaloids as geraniol, 74 to 77 per cent. According to reports from confidential quarters, there are several new adulterants being used this year, the nature of which is at present quite unknown.

Parry, Ernest J., has during the past fifteen years examined about 600 samples of otto of rose, and asserts that pure otto never attains so high a specific gravity as 0.862, while it frequently, in certain years, is as low as 0.850. He suggests 0.850 to 0.860 as limits. For refractive index he suggests 1.4600 to 1.4650 at 25°. He thinks that any otto with a refractive index below 1.4600 is adulterated, and almost invariably with alcohol.—*Ibid.* p. 450; see also p. 523.

Hill and Umney, commenting on the paper by Parry, state that they do not propose to alter the monograph on otto of rose as written. The specific gravity is largely dependent upon the proportion of stearoptene, and must of necessity be taken in conjunction with the other physical and the chemical characters.—*Ibid.* p. 492.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 60) report on 21 samples of oil of rose, 6 of which were rejected, and the constants of the pure oils were found to range as follows: Specific gravity (30°) 0.854 to 0.860, optical rotation (30°) -2° to -5° ; melting point, 20° to 22.5° , and refractive index, 1.460 to 1.465. See also p. 81.

An editorial (Am. Perf. 1911-12, v. 6, p. 279) calls attention to a letter from Orosoff et Fils (Perf. & Ess. Oil Rec. Jan. 1912) which is characterized as the openest and most unblushing confession of guilt. They assert that adulteration of otto of rose is universal from grower to shipper; that the exporter is more to blame than the grower; that the Government seal on the copper means nothing; that buyers should put aside all confidence in trade-marks; that testing by odor

is unreliable and analysis is the only sure guide; that they [the writers] are not competent chemists, nor have they any in their employ.

OLEUM ROSMARINI.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, p. 110) point out that the Ph. Ndl. IV requires rosemary oil not to rotate above $+15^{\circ}$ in a 2-dm. tube. This error has now been removed, the supplement stating (which is correct) that the requirement applies to a 1-dm. tube.

They also (*Ibid.* Apr. 1911, p. 133), in discussing the Ph. Ross. VI, assert that dextrorotation is a special characteristic of rosemary oil; pure oils which are lævorotatory are only rarely met with; in the great majority of instances lævorotation is caused by adulteration with French turpentine oil. The initial turbidity of a solution of oil of rosemary in 90 per cent alcohol is to be attributed to the fact that the oil always contains water.

An unsigned abstract (Oil & Color Tr. J.) notes that according to the Ph. Ross. rosemary oil is necessarily lævorotatory. As a matter of fact, it is true that many oils are lævorotatory, but the majority are dextrorotatory. To prescribe lævorotation means the exclusion of very many fine and most pure oils.—Am. Perf. 1911-12, v. 6, p. 155.

Jeancard and Satie discuss the principal characteristics of the oils of rosemary.—Am. Perf. 1911-12, v. 6, pp. 6-8. See also Schimmel & Co. (Semi-Annual Report, Oct. 1911, pp. 78-79).

The Committee of Reference in Pharmacy (Third Report, p. 18) proposes for oil of rosemary the specific gravity, 0.895 to 0.920; optical rotation, -2° to $+15^{\circ}$; refractive index at 25° , 1.463 to 1.473. Soluble in an equal volume of 90 per cent alcohol, and in 5 to 10 volumes of 80 per cent alcohol; to contain not less than 10 per cent of total alcohols, calculated as borneol, and not less than 1.8 per cent of esters, calculated as bornyl acetate. See also Pharm. J. 1911, v. 87, p. 592.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 100) quote Henderson, who has on several occasions called attention to the fact that English oil of rosemary is not always lævorotatory, and that dextrorotatory oil of this description is occasionally met with.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 30) report that the results obtained during the year enable them to confirm the statement that under the monograph proposed for inclusion in the forthcoming pharmacopœia some genuine distillates would be excluded by the nonadmission of dextrorotatory oils.

Smith, Kline & French Co. (Analytical Report, 1911, p. 34) reports that 2 of the 7 samples of oil of rosemary examined were found not to be soluble in 50 parts of 80 per cent alcohol. See also Bull. Am. Pharm. Assoc. 1911, v. 6, p. 346, and Proc. Pennsylvania Pharm. Assoc. 1911, p. 126.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 60) report the following variations observed in 12 samples of oil of rosemary: Specific gravity, 0.8965 to 0.912; optical rotation, -3.32° to $+10.54^{\circ}$; refractive index, 1.4677 to 1.4705; total borneol, 9.9 per cent to 18.2; ester value, 2.4 to 4.6; and soluble in 1 to 6 volumes of 80 per cent alcohol. See also p. 79.

OLEUM SABINÆ

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 106) report that, while engaged in preparing sabinene from savin oil, they obtained a fraction of boiling point 170° to 180° from which, after repeated distillation, they succeeded in isolating a portion with a constant boiling point.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 31) report that they have again to note that foreign distilled oils frequently vary considerably from the usually accepted standards. Two samples examined gave: Specific gravity, 0.912 and 0.913; rotation, $+52.50^{\circ}$ and $+47.45^{\circ}$; distillate below 200° , 48 and 54 per cent; saponification value, 121.9 and 102.6; refractive index, 1.4761 and 1.4778.

OLEUM SANTALI.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Apr. pp. 67-70) present tables indicating the quantities of sandalwood offered at auction. See also *Ibid.* Oct. p. 63.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, pp. 80-83) discuss the economic conditions of the sandalwood market, and report on a sample of adulterated oil of sandalwood examined by them. See also Apr. 1911, pp. 101-105.

An unsigned abstract (Perf. & Ess. Oil Rec. Apr.) states that the wood from which sandalwood oil is obtained has not definitely been identified by botanists.—Pharm. J. 1911, v. 86, p. 567.

An unsigned article (New Idea, 1911, v. 33, pp. 148-149) describes and illustrates a santal oil distilling plant.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 129), in discussing the Ph. Germ. V requirements for oil of santal, that it give a clear solution at 20° with from 5 to 7 parts dilute alcohol, the solution must remain clear when more dilute alcohol is added, state that the possible occurrence of clouding does not necessarily indicate adulteration, but may be due to products of decomposition or resinification such as are formed when the distillation is carried out in an unsuitable manner.

Hartwich, C., notes that the Ph. Germ. V now permits of a specific gravity of from 0.973 to 0.985. The solubility in alcohol is more sharply defined. The assay method for santalol is similar to that employed in the Ph. Helv. and Ph. Ndl.—Apoth.-Ztg. 1911, v. 26, p. 56.

See also Pharm. J. 1911, v. 86, p. 654, and Chem. & Drug. 1911, v. 78, p. 260.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 133), discussing the Ph. Ross. VI requirements for sandalwood oil, report that the specific gravity ranges from 0.975 to 0.985.

An unsigned abstract notes that the Ph. Ross. gives no santalol value for sandalwood oil, an omission scarcely to be found in any other modern pharmacopœia. The boiling values are useless for this oil owing to some decomposition taking place during the operation.—Am. Perf. 1911-12, v. 6, p. 155.

The Committee of Reference in Pharmacy (Third Report, p. 19) proposes for oil of sandalwood the specific gravity, 0.973 to 0.985; optical rotation, -13° to -21° ; refractive index at 25° , 1.498 to 1.508; soluble in 6 volumes of 70 per cent alcohol at 20° (as now, except that no temperature is now specified); to contain not less than 90 per cent of total alcohols, calculated as santalol. See also Pharm. J. 1911, v. 87, p. 592.

Parry, Ernest J., states that the lowering of the minimum optical rotation of sandalwood oil to -13° is much to be regretted, and will materially assist the not uncommon practice of standardizing this oil down to Ph. Brit. limits. Of 1,500 samples examined, he practically never found one below -16° .—Chem. & Drug. 1911, v. 79, p. 450; see also p. 523.

Hill and Umney, commenting on the paper by Parry, state that the latter's opinion is in disagreement with that of the leading English distillers. They have no knowledge that the distillates of low optical rotation (-13° to -15°) are other than normal distillates.—Chem. & Drug. 1911, v. 79, p. 492.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 104) report that the fraction of oil of sandalwood boiling between 210° and 220° contains an alcohol $C_{16}H_{16}O$, which on further examination has been demonstrated to be identical with teresantalol, prepared by reducing the ester of teresantallic acid.

Zimmermann, A. (Eng. Pat. 2344, Jan. 30, 1911), describes a process for the manufacture of santalol and menthol ethers.—J. Soc. Chem. Ind. 1911, v. 30, p. 649.

Smith, Kline & French Co. (Analytical Report, 1911, p. 35) reports that the santalol content of all samples of oil of santal ranged from 88.3 to 97.2 per cent. Optical rotation at 25° was from -11.55° to -20° .

Pearson, W. A., reports that 1 sample of oil of santal had an optical rotation of -15.12° , which is slightly below the U. S. P. limit. One was not soluble in 100 volumes of 70 per cent alcohol.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 126. Also Bull. Am. Pharm. Assoc. 1911, v. 6, p. 346.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 62) report on 26 samples of sandalwood oil, which varied between the following limits: Specific gravity, from 0.975 to 0.9804; optical rotation, from -13.58° to -20.46° ; refractive index, 1.5043 to 1.5105; total santalol, 92.7 to 95.7 per cent; ester value, 3 to 6.9 per cent; and soluble in 2.5 to 7 volumes of 70 per cent alcohol. See also p. 79.

Southall Bros. Barclay (Rep. 1911, Birmingham, 1912, p. 31) still find that a temperature of 20° to 25° is necessary to form a clear solution with 6 volumes of 70 per cent alcohol. The range observed for the 6 samples examined was: Specific gravity, 0.9735 to 0.9785; rotation, -16.05° to -17.75° ; alcohol as santalol, 89.90 to 95.96 per cent; refractive index, 1.5030 to 1.5045.

Dixon, W. E., states that the essential oils of copaiba, cubebs, and sandalwood are most used, since they are less irritant and therefore can be given in larger doses than most others, but that they act unequally on different organisms; they are quite feeble against putrefactive organisms or *Bacillus coli*, but against staphylococci they exert quite a powerful antiseptic action.—Pharm. J. 1911, v. 87, p. 17.

OLEUM SASSAFRAS.

Miller and Marsh, commenting on the article of George R. Pancoast (Am. J. Pharm. v. 80, p. 220), report the results of their analyses of an oil known to be pure in which they found camphor.—Am. Perf. 1911-12, v. 6, p. 85.

Kleber, C., calls attention to his demonstration (Pharm. Rev. 1898, v. 14, p. 101) of the above fact.—*Ibid.* p. 113.

Smith, Kline & French Co. (Analytical Report, 1911, p. 35) reports on 11 samples of oil of sassafras. One sample had lævorotary properties, and was evidently a mixture of safrol and oil of camphor.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 62) report the following variations in the constants of 6 samples of oil of sassafras: Specific gravity, 1.076 to 1.0815; optical rotation, $+2.10^{\circ}$ to $+2.42^{\circ}$; refractive index, 1.5283 to 1.5304; and soluble in 1 to 3 volumes of 90 per cent alcohol. See also p. 79.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 31) report that the physical characters of the 6 samples of oil of sassafras examined showed but little variation.

OIL OF SESAME.

Tunmann, O., states that sesame seed is being imported into Hamburg in rapidly increasing quantities. Ten years ago the chief supply of this seed came from British India, but at the present time China leads all of the other countries.—Apoth.-Ztg. 1911, v. 26, p. 579.

An unsigned article (Bull. Imp. Inst. 1911, v. 9, pp. 259-272) discusses the cultivation, production, and utilization of sesamum seed, also known by a number of common names in commerce, amongst those frequently used being "sesame," "sim-sim," or "sem-sem," "til" or "teel," "gingelly" (sometimes spelled "jinjilli"), and "benne" or "benni."

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 260) points out that oil of sesame is required to have a specific gravity of from 0.921 to 0.924; iodine value, 103 to 112; and saponification value, 188 to 193. See also Pharm. J. 1911, v. 86, p. 654.

Serger, H., in a review of the special reactions of oils and fats, calls attention to the various reactions characteristic of oil of sesame, and cites upward of 50 references to the literature on the subject.—Chem. Ztg. 1911, v. 35, pp. 602-603.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 19) report again the occurrence of cotton seed oil in a sample of sesame oil.

OLEUM SINAPIS VOLATILE.

Hartwich, C., points out that the Ph. Germ. V now describes only the synthetic oil of mustard.—Apoth.-Ztg. 1911, v. 26, p. 56.

See also Pharm. J. 1911, v. 86, p. 654, and Chem. & Drug. 1911, v. 78, p. 124.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 129), in discussing the Ph. Germ. V requirements for mustard oil, assert that the minimum limit of specific gravity is too high; it should be 1.020.

They also (*Ibid.* p. 125) commend the substitution of artificial for natural mustard oil on the ground that the artificial oil is much the cheaper and that at the present time there is no means of distinguishing analytically between the two oils.

Heinrich Haensel (Bericht, Oct.-Apr. 1910-11, p. 46) points out that the Ph. Germ. V now describes only the synthetic product.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 132), discussing the Ph. Ross. VI requirements for mustard oil, note that the minimum specific gravity limit is too high; it should be 1.014. The principal fraction of mustard oil boils between 151 and 153°.

The Committee of Reference in Pharmacy (Third Report, p. 19) proposes for volatile oil of mustard the specific gravity, 1.014 to 1.025; to distil between 148° and 156°; to contain not less than 92 per cent of allyl isothiocyanate, this being determined by a method which is described, and which consists of heating an alcoholic solution with ammonia and silver nitrate, and titrating the excess of silver with thiocyanate solution. See also Pharm. J. 1911, v. 87, p. 592.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 51) report on 8 samples of oil of mustard (fixed) which were found to vary

in specific gravity from 0.921 to 0.924, and in refractive index from 1.4759 to 1.4768. See also p. 78.

OLEUM TEREBINTHINÆ.

Gehe & Co. (Handelsbericht, 1911, pp. 95-97) present tables showing the destination of oil of turpentine exported from the United States, and point out that the center of production for this oil is gradually being displaced southward and that the future source will no doubt be Mexico. Among the adulterants that have been observed during the last year are petroleum benzin, xylol, rosin oil, and copal oil.

See also J. Soc. Chem. Ind. 1911, v. 30, p. 908.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, pp. 112-119) review a number of recent communications on oil of turpentine and its possible production in different parts of the world.

Veitch and Donk discuss wood turpentine: its production, refining, properties, and uses.—Bull. Bur. Chem. U. S. Dept. Agric. 1911, No. 144.

An unsigned article (Sc. Am. Suppl. 1911, v. 72, p. 197) describes and illustrates the recovery of turpentine from logs and stumps.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, pp. 88-95) call attention to a number of papers on oil of turpentine and the turpentine industry, and present tables showing the output of turpentine oil during the years 1905-1910, the output of rosin, and the exports of these products from the United States.

They (*Ibid.* Apr. 1911, p. 130) assert that the Ph. Germ. V requirements for turpentine oil for optical rotation admits American as well as French turpentine oil.

Rosenthaler, L., points out that the Ph. Germ. V permits oil of turpentine to be either dextro or lævorotatory, according to its origin. The specific gravity has been extended to read 0.860 to 0.877, and the boiling point, 155 to 165°. It must yield a clear solution with 7 parts of alcohol.—Pharm. Zentralh. 1911, v. 52, p. 17.

See also Pharm. J. 1911, v. 86, p. 654, and Chem. & Drug. 1911, v. 78, p. 260.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, p. 110) point out that the Ph. Ndl. IV description dealing with the preparation of turpentine oil has been revised so that the proportion of the oil used which must distill over is no longer fixed at exactly three-fourths of the whole but at "about" that figure.

They also (*Ibid.* Apr. 1911, p. 134), in discussing the Ph. Ross. VI requirements for crude turpentine oil, assert that turpentine is not soluble in 8 to 10 parts of 80 per cent alcohol.

Wilcox, Levi, recommends that every wholesale druggist have an analysis made occasionally of the spirits turpentine he is receiving and sending out on his orders, some of it for medicinal purposes.—Proc. N. W. D. A. 1911, p. 108.

Wiley, H. W., reports that 300 samples of commercial turpentine, collected all over the country, have been examined; the results showing but little adulteration on the part of the producer, while samples collected from dealers show from 13 to 18 per cent of the samples to be adulterated, with mineral oils present in amounts varying from 2 to 3 per cent to 60 or 70 per cent.—Ann. Rep. U. S. Dept. Agric. 1911, 1912, p. 465.

Smith, Kline & French Co. (Analytical Report, 1911, p. 35) reports that 21 samples of oil of turpentine were examined. Four samples were adulterated with kerosene.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 71) report on 33 samples of genuine turpentine which showed the following variation in value: Specific gravity, 0.866 to 0.871; optical rotation, -2.12° to $+8.45^{\circ}$; refractive, 1.4697 to 1.4719; 80 per cent boils at from 158° to 165° ; and residue unpolymerized (U. S. P. tests) from 6 to 12 per cent. See also p. 79.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 32) report that they have before commented on the great variation in optical rotation experienced recently in this oil, and the figures of the year show this to be still more pronounced.

An unsigned article (Bull. Imp. Inst. 1911, v. 9, pp. 8-10) reports on the examination of 2 samples of turpentine oil from India, and points out that this oil could be used in place of Russian oil, which is now widely used for the cheaper grades of varnish and for making certain disinfectants.

Fernandez states that the principal constituent of Andalusian pine is a terpene, which is not quite identical with ordinary pinene.—Am. Perf. 1911-12, v. 6, p. 287.

Richardson and Whitaker contribute a second paper on the analysis of oils of turpentine, with tabulated results.—J. Soc. Chem. Ind. 1911, v. 30, pp. 115-117.

van der Wielen, P., discusses the examination of oil of turpentine and presents a table showing the results obtained with turpentines of differing origin, with turpentine substitutes, and with adulterated oils.—Pharm. Weekblad, 1911, pp. 1026-1031.

Grimaldi, Carlo, reports some observations on the qualitative reactions of oil of turpentine and related products.—Chem. Ztg. 1911, v. 35, p. 52.

Blarez, Ch., presents a communication on the analysis of turpentine oils, with tabulated statement of results.—Ann. chim. analyt 1911, v. 16, pp. 328-336.

Vavon, G., presents a communication on the hydrogenation of oil of turpentine.—Bull. Soc. chim. France, 1911, v. 9, pp. 256-261.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Oct. pp. 121-124) present a review of recent literature on the chemistry of oil of turpentine.

Wilcox, Levi, reports a number of cases in which spirit of turpentine was guaranteed pure in the correspondence, and the barrels were all branded "Pure spirits turpentine," without any qualifying phrase, as "For technical use only." The adulterant was high boiling petroleum, the quantity varying from 10 per cent to 30 per cent. Four of these condemned shipments came from naval stores dealers in New York City, one shipment of 5 barrels coming from Philadelphia.—*Proc. N. W. D. A.* 1911, pp. 107-108.

Amos, W. S., thinks that the U. S. P. test for mineral oil in oil of turpentine is rather vague.—*Proc. Missouri Pharm. Assoc.* 1911, p. 98.

Pearson, W. A., reports that 4 samples of turpentine were rejected because they contained kerosene in quantities of 10 to 25 per cent.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 131. Also *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 348.

Dunlap, Renick W., reports that, of 86 samples of oil of turpentine examined, 50 were not passed.—*Rep. Ohio Dairy & Food Com.* 1910-11, p. 50.

Notices of Judgment Nos. 712, 792, 877, 929, 1022, and 1124, under the food and drugs act, deal with the adulteration and misbranding of turpentine.

Robinson, Beverley, states that the best combination for mild counter irritation over the chest or abdomen is obtained with turpentine and soap liniment, equal parts, sprinkled on warm flannel, with or without oil silk or thin rubber tissue covering.—*Critic and Guide*, 1911, v. 14, p. 338.

Smith, Eustace, reports a case of acute failure of eyesight treated with oil of turpentine.—*Brit. M. J.* 1911, v. 1, p. 82.

Carles, P., contributes a brief article on essence of turpentine in therapeutics.—*Répert. pharm.* 1911, v. 23, p. 49.

Wintsch, Carl Herman, reports a case of poisoning from the rectal injection of 2 drachms of oil of turpentine.—*Hahnemann. Month.* 1911, v. 46, pp. 134-136.

A number of additional references on the chemistry and uses of oil of turpentine will be found in *Chem. Abstr.*; *Exper. Sta. Rec.*; *Ann. falsif.*; *Ztschr. Unters. Nahr. u. Genussm.*; and *Chem. Centralbl.*

OLEUM TEREBINTHINÆ RECTIFICATUM

Murray, B. L., points out that the U. S. P. requires that "about 10 cc." of rectified oil of turpentine evaporated on the water bath should leave "no weighable residue." He thinks this is an undesirable requirement, as worded at present, because the expression "about 10 cc." is indefinite; because the expression "no weighable residue," if taken literally, is too severe; and because rectified oil of turpentine upon evaporation turns in part to a resinous substance that does remain behind and may be weighed.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 14.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 260) notes that rectified oil of turpentine is obtained by distillation of a mixture of 1 part of the former product and 6 parts of solution of lime. Boiling point, 155° to 162°; specific gravity, 0.860 to 0.870. Its alcoholic solution should not redden moistened litmus paper.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 134), discussing the Ph. Ross. VI requirements for rectified oil of turpentine, assert that a specific gravity range of 0.855 to 0.870 is more correct. The bulk of rectified turpentine oil boils over between 155 and 162°.

The Committee of Reference in Pharmacy (Third Report, p. 19) changes the name of *oleum terebinthinæ*, Ph. Brit., to *oleum terebinthinæ rectificatum*, and recommends that the expression "rectified if necessary" be changed to "rectified by redistillation." See also Pharm. J. 1911, v. 87, p. 592.

OLEUM THEOBROMATIS.

Rosenthaler, L., points out that the Ph. Germ. V has increased the upper limit of melting point from 33 to 34°. He also states that still higher melting points have been reported.—Pharm. Zentralh. 1911, v. 52, p. 14.

See also Pharm. J. 1911, v. 86, p. 654, and Chem. & Drug. 1911, v. 78, p. 230.

The Committee of Reference in Pharmacy (Third Report, p. 20) proposes the following for cacao butter: Specific gravity, 0.990 to 0.998; melting point, 30° to 33°; saponification value, 188 to 195; iodine value, 35.5 to 37.5; acid value, not over 2; refractive index at 40°, 1.4565 to 1.4575. The present test for other fats by means of its solubility in ether is retained, with the alteration of 15.5° to 15°. It is noted that the melting point and specific gravity should be determined seventy-two hours (or more) after melting. See also Pharm. J. 1911, v. 87, p. 592.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 22) report that 5 samples of cacao butter showed acid value from 1.7 to 3.5, saponification value from 189.7 to 196, iodine value from 36.6 to 40.9, and melting point from 32.5° to 34°. One other sample had the somewhat high acid value of 4.2.

An unsigned review of volume 1 of Ernest J. Parry's work on Food and Drugs (Brit. & Col. Drug. 1911, v. 60, p. 471) points out that under cacao butter the analyses of substitutes are given, but the Shea butter figures will bear revision, and both the cocoanut and palm nut stearines vary at each factory producing them.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 10) report that 11 samples of cacao butter have been examined, none of which showed any departure from the characteristic constants. The

figures obtained were: Melting point, 32° to 34° ; saponification value, 192.1 to 192.2; iodine absorbed, 36.02 to 39.68 per cent.

Wild, R. B., gives the melting point of cacao butter as 33° .—Brit. M. J. 1911, v. 2, p. 161.

OLEUM THYMI.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 130), discussing the Ph. Germ. V requirement that thyme oil be soluble in 3 volumes of a mixture of 100 cc. alcohol and 14 cc. water, point out that this mixture corresponds to an alcohol of 79 to 80 per cent by volume.

An unsigned review of the Ph. Germ. V (Chem. & Drug, 1911, v. 78, p. 260) states that oil of thyme is required to contain at least 20 per cent of thymol and carvacrol and have a specific gravity of not under 0.900.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 133), discussing the Ph. Ross. VI requirements for thyme oil, point out that rectified thyme oils also gradually revert to the red-brown color of the crude oil. As thyme oil occasionally has a specific gravity above 0.91, it would be more correct to require only that the specific gravity must be not below 0.90.

An unsigned abstract (Oil & Color Tr. J.) notes that the Ph. Russ. gives the maximum specific gravity of thyme oil as 0.910. This will exclude many genuine oils of high phenol content, and will also exclude those oils which contain as much as 70 per cent of phenols, mostly carvacrol. The latter point is possibly intentional.—Am. Perf. 1911-12, v. 6, p. 155.

Schneider, Albert, reports on 8 samples of thyme, 1 of which, or 12.2 per cent, was a substitution product.—Pacific Pharm. 1911, v. 5, p. 177.

An unsigned article (Bull. Imp. Inst. 1911, v. 9, pp. 388-389) discusses the composition of Trieste origanum and white thyme. The origanum plants yield 3.3 per cent of pale yellow oil, which possesses a pronounced odor of thymol and a burning taste. The Dalmatian white thyme yielded 1.64 per cent of an oil possessing the characteristic odor of carvacrol.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 69) report the following variation observed in 12 samples of oil of thyme (so-called origanum): Specific gravity from 0.918 to 0.9325, refractive index from 1.4912 to 1.4919, phenols from 31 to 37.5 per cent, and soluble in 1.5 volumes of 80 per cent alcohol. See also p. 79.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 31) report that the only sample of genuine oil of thyme examined gave: Specific gravity, 0.920; phenols, 37.3 per cent; rotation, -0.80° .

OLEUM TIGLI.

Lloyd, John Uri, points out that the ancient Hindu physicians were not acquainted with croton tiglium, which seems to have originated

in China, whence at an early day the seeds were also introduced into Persia.—Bull. Lloyd Libr. 1911, No. 18, pp. 32–34.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 29) report on 3 samples of croton oil, the specific gravity of which varied from 0.944 to 0.9471, the refractive index from 1.479 to 1.480, and the optical rotation (10 per cent solution) from $+0.50^{\circ}$ to $+8^{\circ}$. See also p. 80.

Fornias, Eduardo, states that croton tiglium is a very much neglected remedy. It certainly produces a vesicular eruption, developed on an erythematous base, and has been recommended for facial zona.—Hahnemann. Month. 1911, v. 46, p. 237.

OPII PULVIS.

Gehe & Co. (Handelsbericht, 1911, p. 98) point out that the new Ph. Germ. V now requires at least 12 per cent of morphine for crude opium, and the powdered drug is reduced to uniform 10 per cent strength by the addition of rice starch.

Rusby, H. H., is of the opinion that when powdered opium is standardized by the addition of chaffy substances it should conform not only to a minimum but to a maximum percentage of morphine.—Pharm. Era, 1911, v. 44, p. 141.

Hartwich, C., points out that the Ph. Germ. V now complies with the requirements of the Brussels Protocol in regard to the strength of powdered opium. The diluting material is rice starch.—Apoth.-Ztg. 1911, v. 26, p. 57. See also Am. Druggist, 1911, v. 58, p. 138.

Noyes, C. R., notes that the U. S. P. requires opium, powdered or granulated, to contain 12 per cent and tincture of opium 1.2 per cent of morphine.—Proc. Minnesota Pharm. Assoc. 1911, p. 77.

Hull, Seymour C., suggests making the standard for opium 10 per cent, in place of 12 to 12.5 per cent.—Proc. New York Pharm. Assoc. 1911, p. 92.

Bachman, Gustav, reports that the sample of powdered opium analyzed by him assayed 10.38 per cent of crystallized morphine.—Proc. Minnesota Pharm. Assoc. 1911, p. 102.

Vanderkleed, Chas. E., reports 8 assays of powdered opium, lowest 11.960 per cent, highest 12.430 per cent morphine.—Proc. Pennsylvania Pharm Assoc. 1911, p. 132.

Smith, Kline & French Co. (Analytical Report, 1911, p. 36) reports that 17 samples of powdered opium assayed from 11.72 to 19.38 per cent of crystallizable morphine.

OPIMUM.

Lloyd, John Uri, states that the discovery of the medical qualities of opium is lost in times gone by. This insidiously active drug came to the attention of the profession of medicine through its well-known

qualities, as established by the people of its native land.—Bull. Lloyd Libr. 1911, No. 18, pp. 62–63.

Muszyński, Jan, reports experiments in the cultivation of the poppy and the production of opium in the botanical garden at Dorpat. The opium collected assayed 12.2 per cent morphine.—Apoth.-Ztg. 1911, v. 26, pp. 431–432. See also Pharm. Ztg. 1911, v. 56, p. 604.

Mitlacher, Wilhelm, reports his experience in the cultivation of *Papaver somniferum*.—Pharm. Post, 1911, v. 44, pp. 215–216.

True, R. H., reports some experiments in the cultivation of the opium poppy and states that it yields a good crop in Vermont and a bumper crop in the dry climate of the State of Washington.—Proc. N. W. D. A. 1911, p. 170.

Gehe & Co. (Handelsbericht, 1911, pp. 97–99) discuss the present condition of the opium market and point out that the stringent regulations of the Chinese Government regarding the cultivation of opium are being rigidly enforced.

Miller, Adolph W., reports that recent advices from Smyrna claim that the crop is only about one-quarter to one-third of the normal quantity.—Proc. N. W. D. A. 1911, p. 97.

An unsigned article reviews the cultivation of opium in Turkey and discusses the importance of the crop, method of cultivation, the alkaloidal content of the drug of commerce.—J. Agric. trop. 1911, v. 11, pp. 367–369.

Ravndal, G. Bie, reports that the 1910 opium crop in Turkey amounted to about 10,000 cases, double that of 1909.—Cons. & Tr. Rep. July 26, 1910, p. 387.

An unsigned article calls attention to the suppression of the cultivation of opium in China.—Pharm. Post, 1911, v. 44, p. 573.

An editorial (Chem. & Drug. 1911, v. 78, p. 916) discusses opium cultivation in China.

Arnold, Julean H., reports that Shensi has so far succeeded in reducing the opium poppy acreage grown by about 60 per cent.—Cons. & Tr. Rep. Apr. 29, 1911, pp. 453, 455.

An editorial (Chem. & Drug. 1911, v. 78, p. 18) comments on the uncompromising attitude of China in regard to the Indian imports of opium, and adds that China is not able to give statistical proof of a reduction in opium cultivation.

An editorial note (Montreal Pharm. J. 1911, v. 22, p. 35) points out that overwhelming practical proof is afforded all over China that the people even more than the Government recognize in opium a deadly national mischief and are resolved upon its extirpation.

An editorial note (Pharm. J. 1911, v. 87, p. 2) states that the diminution in the use of opium in China seems to be leading to an excessive use of alcohol.

An editorial note (*Ibid.* p. 7) reviews the Indian opium trade and gives tabulated statements of production and value. The number of chests sold for export fell from 52,800 in 1906-7 to 42,300 in 1909-10.

Wright, Hamilton, outlines the work of the Anti-Narcotic Conference at The Hague to adopt uniform laws.—*Pharm. Era*, 1911, v. 44, p. 109.

A series of news notes (*Pharm. Weekblad*, 1911, v. 48, pp. 1131-1133, 1347-1349, 1370-1372) reports on the initial sessions of the International Opium Congress at The Hague. See also *Pharm. J. Lond.* 1911, v. 87, p. 776, and *Chem. & Drug.* 1911, v. 79, p. 860.

An editorial note (*Pharm. J.* 1911, v. 86, p. 616) gives some of the details of the agreement between the Chinese and British Governments with reference to the opium trade. See also pp. 647, 768.

An editorial (*Oil, Paint, and Drug Reporter*, 1911, v. 80, Aug. 7, p. 7) states that it is a lamentable fact that the United States has become the greatest consumer of opium of any country in the world. We import an amount equal to more than one-third of the entire opium crop of Turkey.

An editorial (*Chem. & Drug.* 1911, v. 79, p. 384) asserts that, next to China, the United States consumes more opium than any other country. The total imports into the United States for the fiscal year ending June 30, 1911, is said to be 629,842 pounds, as compared with 449,239 pounds in the previous fiscal year.

An editorial (*Critic and Guide*, 1911, v. 14, p. 51) calls attention to the spread of the opium habit among respectable boys on the East Side, New York.

A news note (*Oil, Paint, and Drug Reporter*, 1911, v. 79, Jan. 23, p. 25) quotes William J. Schieffelin as asserting that there are 400,000 pounds of opium imported into the United States every year, probably eight times as much as is required for legitimate use in medicine.

Koch, Christopher, discussing the Pennsylvania cocaine and morphine crusade, asserts that 150,000 Americans in the United States smoke 68,000 pounds of opium, and 120,000 Chinese in the United States smoke 100,000 pounds of opium every year.—*Midl. Drug.* 1911, v. 45, pp. 211-216.

An editorial (*New Idea*, 1911, v. 33, pp. 98-99), in discussing the growing menace of opium, quotes Hamilton Wright as saying that the United States consumes more opium per capita than does China. In the last fifty years the annual consumption of opium in this country has increased practically three times as fast as the population, the total now amounting to 500,000 pounds a year.

An editorial (*D.-A. Apoth.-Ztg.* 1911-12, v. 32, p. 34) comments on a recent article published in the London Times in regard to the opium traffic between China and India, and notes that the methods

of restricting the use of opium which are being followed in China may well be adopted in the United States.

An editorial (N. York M. J. 1911, v. 93, p. 281) asserts that Hamilton Wright's statement as to the consumption of opium in the United States, as compared with that in the central European States, is misleading and that, as we also consume more of everything else, it would seem more scientific and more accurate to assume that, living on a higher scale in other lines, the American would naturally consume a larger amount not only of opium but of other medicines.

Dimmitt, Addison, asserts that the sale of opium and its derivatives should not be tolerated.—*Western Druggist*, 1911, v. 33, pp. 348–350.

An editorial (J. Am. M. Assoc. 1911, v. 56, p. 1577) discusses the opium problem, Oriental and Occidental.

A discussion on the Foster Bill by the New York Branch of the A. Ph. A. is reprinted.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 83.

An editorial (*Pacific Drug Rev.* 1911, v. 23, Apr., p. 40) notes that the possession of opium in California is a misdemeanor and that the law has recently been upheld by a decision handed down by the Supreme Court.

Hartwich, C., states that the Ph. Germ. V describes opium under two headings and has slightly modified the assay process, so as to make it more readily followed.—*Apoth.-Ztg.* 1911, v. 26, p. 56. See also *Pharm. J.* 1911, v. 86, p. 295.

Rosenthaler, L., points out that opium and powdered opium are included under separate headings in the Ph. Germ. V, and that the latter, in accordance with the Brussels Protocol, is required to contain 10 per cent of morphine.—*Pharm. Zentralh.* 1911, v. 52, p. 28.

André, L., comments on commercial opium and the definition of the French Codex.—*J. Pharm. et Chim.* 1911, v. 3, pp. 162–166.

Faltis, Franz, reviews the nature of the alkaloids formed in the *Papaveraceæ* and related plant families.—*Pharm. Post*, 1911, v. 44, pp. 535–538.

Heinrici, Walter, in German patent 232,126 describes a method for the production of alkaloids directly from the juice of the poppy by introducing a fermentation process.—*Chem. Repert.* 1911, v. 35, p. 206. See also *Pharm. Post*, 1911, v. 44, p. 871.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 17) report that the 3 parcels of opium assayed for morphine all showed high percentages, needing large dilution to reduce to the 10 per cent standard of the official powder. The figures obtained ranged from 14.40 to 15.87 per cent.

"D. B." states that, according to W. Mitlacher, the addition of the flour of powdered poppy leaves may be detected by microscopic

examination which discovers the presence of the cellules which do not exist in pure opium. This adulteration, formerly very common, is much less frequent since the Codex has required 12 per cent of morphine in place of 10 per cent.—Bull. sc. pharmacol. 1911, v. 18, Annexes, p. 10.

Carles, P., describes a false Smyrna opium.—J. Pharm. et Chim. 1911, v. 4, p. 343. See also Répert. pharm. 1911, v. 23, p. 481, and Ann. falsif. 1911, v. 4, p. 509.

Rosenthaler, L., calls attention to and describes the crystals obtained from opium by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, p. 343.

Kiczka, M., reviews the present status of our knowledge of the opium alkaloids.—Pharm. Prax. 1911, v. 10, pp. 254–259.

An editorial (J. Am. M. Assoc. 1911, v. 56, p. 1268) calls attention to certain opium containing proprietaries and the danger that physicians may be misled by testimonials regarding them.

Puckner, W. A., calls attention to the fact that morphine is the most powerfully narcotic substance found in opium, and it is present in the largest proportion of any of the alkaloidal constituents. Its removal from an opium preparation would therefore render that preparation practically valueless.—*Ibid.* p. 1278.

Dobbie and Lauder report an analysis of a new alkaloid from opium for which the name neopine had been suggested. They conclude that the alkaloid is almost certainly a hydroxycodine, but that it is not identical with the hydroxycodine prepared by Ach and Knorr (Ber., 1903, v. 36, p. 3067) by the oxidation of codeine.—J. Chem. Soc. Lond. 1911, v. 99, pp. 34–35.

Rabe and McMillan discuss the structural relations of narcotine and hydrastine.—Ann. Chem. 1910, v. 377, pp. 223–258.

Gadamer, J., reports a study of the alkaloids of *Papaver orientale* and *P. lateritium*.—Arch. Pharm. 1911, v. 249, pp. 39–42.

Mittlacher and Wasicky report experiments on the isolation of opium alkaloids from the expressed juice of the unripe poppy capsules.—Ztschr. allg. österr. Apoth.-Ver. 1911, v. 49, pp. 53–56.

Bernegau, L. H., discusses the sampling of gum opium and outlines a method for securing a homogeneous mass free from lumps.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 309.

Kimberly, C. H., reports the opinion that in the assay of opium larger and purer crystals can be obtained by adopting the suggestion that the solution in which the morphine is to be crystallized be cooled to about 5° before the addition of the ammonia water. A correction of only 0.002 gm. resulted by this method compared to thirty to forty by the U. S. P. method.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 159.

Dohme and Engelhardt think that a shortening of the present U. S. P. process for opium would be desirable.—Am. J. Pharm. 1911, v. 83, p. 524.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 45-51), in discussing the Ph. Germ. V method of assay, point out that the use of acetic ether insures a purer morphine. They also note that titration yields lower results than gravimetric methods.

Frerichs and Mannheim report observations on the Ph. Germ. V assay method for morphine in opium and preparations of opium and describe and illustrate several pieces of apparatus used by them to facilitate the making of the assay.—Apoth.-Ztg. 1911, v. 26, pp. 613-615.

Thorburn, A. D., reports observations on the estimation of morphine by extraction with phenylethyl alcohol.—J. Ind. & Eng. Chem. 1911, v. 3, pp. 754-756.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 120-122) discuss the valuation of opium and present a table showing the morphine content requirement and the limitations for ash included in several pharmacopœias.

Debourdeaux discusses the estimation of morphine in opium and the opium preparations, outlining the methods of several of the pharmacopœias.—J. Pharm. et Chim. 1911, v. 4, pp. 13-18, 65-69, 105-112.

Wiebelitz, H., comments on the paper by Frerichs and Mannheim and mentions some additional precautions that are to be observed in connection with the determination of morphine in opium.—Apoth.-Ztg. 1911, v. 26, p. 824.

Table showing reported variations in morphine content of opium.

Reporter.	Number of samples.	Minimum.	Maximum.	References.
		<i>Per cent</i>	<i>Per cent</i>	
Smith, Kline & French Co...	46	8.68	12.18	Analytical Report, 1911, p. 36.
Vanderkloed, Chas. E.....	10	10.775	12.79	Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.
Evans Sons Lescher & Webb.	22	10.0	12.2	Analytical Notes, 1911, 1912, p. 53.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 4) recommends that the strength of tincture of opium be raised from 0.75 to 1.0 per cent of morphine, but the strength of alcohol should remain as at present, there being no sufficient reason for increasing it. See also Pharm. J. 1911, v. 87, p. 847.

Farr and Wright present some observations on the supposed loss of morphine in the preparation of tincture of opium, and conclude that when the official Ph. Brit. methods are followed throughout there is always a loss of morphine.—Year-Book of Pharmacy, 1911, pp. 392-399. See also Pharm. J. 1911, v. 87, pp. 158-160, and Chem. & Drug. 1911, v. 79, p. 206.

Pancier, Félix, discusses the opium and the opium preparations of the Ph. Fr. V, and proposes that a certain latitude be allowed in the requirements of the latter.—Bull. sc. pharmacol. 1911, v. 18, pp. 449–460. Also J. Pharm. et Chim. 1911, v. 3, p. 184.

Diekman, George C., reports a formula for tincture of opium, made by extracting granulated opium with hot water. An alternate formula directs the solution of extract of opium in diluted alcohol.—Proc. New York Pharm. Assoc. 1911, p. 81.

Raubenheimer, Otto, thinks that tincture of opium with 25 per cent alcohol would be a decided advantage. He thinks 50 per cent alcohol is not necessary and points out that in the present German Pharmacopœia the alcohol content has been reduced to 33 per cent.—*Ibid.* p. 95.

Brown, Lucius P., calls attention to the amended food and drugs law of Tennessee, which requires that no preparation of opium, iodine, camphor, ginger, or peppermint, as defined in the United States Pharmacopœia or National Formulary is allowed to be sold in that State under the name included in the National standards unless the preparation complies fully with the official requirements.—Proc. Tennessee Pharm. Assoc. 1911, p. 90.

Williams, Ed. E., outlines a modification of the formula for tincture of opium in which he suggests the use of powdered and washed pumice for diluting the powdered opium.—Drug. Topics, 1911, v. 26, p. 115. See also Pract. Drug. 1911, v. 29, Apr., p. 36.

White, William R., outlines a new method for making tincture of opium, using maceration for exhausting the drug.—Drug. Circ. 1911, v. 55, pp. 515–516. Also Pharm. Era, 1911, v. 44, p. 481, and Bull. Pharm. 1911, v. 25, p. 374.

Table showing some of the analytical results reported for tincture of opium.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Rose, R. E.....	13	8	Bull. Florida Agric. Dept. 1911, v. 21, pp. 118–119.
Bachman, Gustav.....	2	1	Proc. Minnesota Pharm. Assoc. 1911, p. 102.
Caspari, Charles, Jr.....	70	40	Proc. Maryland Assoc. 1911, p. 101.
Porter, C. S.....	20	18	Am. Druggist, 1911, v. 59, p. 42.
Dunlap, Renick W.....	14	12	Rep. Ohio Dairy & Food Com. 1910–11, p. 48.
Havenhill, L. D.....	32	11	Proc. Kansas Pharm. Assoc. 1911, p. 109.
Coblents, Virgil.....	4	4	J. Ind. & Eng. Chem. 1911, v. 3, p. 540.

Brown, Linwood, A., reports tincture of opium as low as 12 per cent of the U. S. P. strength.—Proc. Kentucky Pharm. Assoc. 1911, p. 99.

Caspari, Charles, Jr., reports finding a sample of tincture of opium containing but 0.205 gm. of morphine in 100 cc.—Proc. Maryland Pharm. Assoc. 1911, p. 100.

Brunker, J. E., reports that of 107 samples of tincture of opium examined, the average extractive was 4 gm. in 100 mls.; alcohol by volume, 43.6 per cent.—*Brit. & Col. Drug.* 1911, v. 60, p. 229.

Notice of Judgment No. 1063, under the food and drugs act, deals with the adulteration and misbranding of tincture of opium.

Sargent, F. Pilkington, outlines the evolution of camphorated tincture of opium. He asserts that paregoric was introduced into medicine by Le Mort, professor of chemistry at Leyden University, early in the Eighteenth Century. It became very popular, and was introduced into the London Pharmacopœia of 1721 as Elixir asthmaticum. It appears that camphor was first added to the formula included in the London Pharmacopœia of 1809.—*Pharm. J. Lond.* 1911, v. 87, p. 716.

Williams, Ed. E., suggests an improvement in the official process for camphorated tincture of opium.—*Pract. Drug.* 1911, v. 29, Apr., p. 36. See also *Drug Topics*, 1911, v. 26, p. 115.

Horn, Wilbur F., thinks that in making camphorated tincture of opium an equivalent amount of the tincture of opium might be used and the preparation thus made extemporaneously.—*Am. J. Pharm.* 1911, v. 83, p. 78.

Rose, R. E., reports that of 16 samples of paregoric, 9 were found to be illegal.—*Bull. Florida Agric. Dept.* 1911, v. 21, pp. 120–122.

Brunker, J. E., reports that of 421 samples of compound tincture of camphor examined, the average extractive was 0.47 gm. in 100 mls.; alcohol by volume, 57.84 percent.—*Brit. & Col. Drug.* 1911, v. 60, p. 229.

The Biennial Report of the Inspection of Pharmacies, 1909–10, states that laudanum (Sydenham's) is found much too weak in extract and morphine and in morphine alone.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 238, and *J. Pharm. Anvers*, 1911, v. 67, p. 562.

Collard, E., Jr., concludes that in the preparation of Sydenham's laudanum variable quantities of opium must be employed with different methods.—*Bull. pharm. Sud.-Est*, 1911, v. 16, pp. 35–43.

Puckner and Hilpert report a further examination of commercial tablets of bismuth, opium, and phenol, and present their findings in the form of a chart, showing the claimed and the contained content of the several ingredients.—*Rep. Chem. Lab. Am. M. Assoc.* 1911, v. 4, pp. 22–25.

Cohnheim and Modrakowski report a series of observations on the action of morphine and an opium preparation on the intestinal tract. They conclude that morphine and opium in doses of 0.01 gm. do not delay the emptying of the stomach, but do produce a marked decrease in the amount of gastric secretion.—*Ztschr. physiol. Chem.* 1911, v. 71, pp. 273–289.

Rappoport, Chassia, reports a number of experiments with combinations of opium and urethane.—*Ztschr. exper. Path. u. Therap.* 1911, v. 9, pp. 39–48.

Fleckseder, Rudolf, reports some observations on the influence of atropine and of opium on calomel diuresis.—Arch. exper. Path. u. Pharmacol., 1911, v. 67, pp. 420-421.

Heeve, William L., gives opium in cases of chronic diarrhoea with painful tormina and much increased peristalsis.—Nat. Eclect. M. Assoc. Quart. 1910-11, v. 2, p. 121.

Additional references on the cultivation, trade, chemistry, pharmacology, and therapeutic uses of opium will be found in Index Med.; J. Am. M. Assoc.; Chem. Abstr.; Pharm. J.; Chem. & Drug.; Zentralbl. Biochem. u. Biophysik; and Chem. Centralbl.

OPIUM GRANULATUM.

Vanderkleed, Chas. E., reports 1 assay of granulated opium, containing 17.065 per cent morphine.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

Ferguson, George A., reports on 1 sample of granulated opium, containing 12.002 per cent morphine.—Proc. New York Pharm. Assoc. 1911, p. 153.

Smith, Kline & French Co. (Analytical Report, 1911, p. 36) reports that 32 samples of granulated opium ranged from 11.5 to 18.58 per cent.

OXYGEN (COMPRESSED).

Neumark, A. S., describes and illustrates the laboratory and commercial production of oxygen.—Sc. Am. Suppl. 1911, v. 72, pp. 254-256.

An editorial (Chem. Eng. 1911, v. 14, p. 274) discusses a novel method of obtaining pure oxygen by the electrolysis of water.

Swinburne, James, contributes a paper on the separation of oxygen by cold.—Chem. News, 1911, v. 103, p. 38.

Société l'Air Liquide (Fr. Pat. 423,224, Feb. 9, 1910) describes a process for the manufacture of oxygen and nitrogen by liquefaction of air.—J. Soc. Chem. Ind. 1911, v. 30, p. 685.

Dewar, James, reports observations on the production of solid oxygen by the evaporation of the liquid.—Proc. Roy. Soc. Lond. 1911, pp. 589-597.

The Council on Pharmacy and Chemistry of the A. M. A. reports an examination of compressed oxygen and outlines tests for the product.—Rep. Council Pharm. & Chem. 1911, pp. 15-17. See also J. Am. M. Assoc. 1911, v. 56, pp. 813, 820.

Craig, Hugh, reports the opinion that a standard is necessary for medicinal oxygen and that an official method for its examination should exist.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 607.

Baskerville and Stevenson report on the examination of commercial oxygen and present a table showing the results of their analyses.

They point out that all of the samples examined by them were medically pure, though not chemically pure, and outline standards of purity for oxygen to be used in medicine.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 471-476.

Watson, Herbert Edmeston, presents a method for the accurate volumetric determination of the oxygen in air.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 1460-1466.

Whipple and Whipple report some observations on the solubility of oxygen in sea water.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 362-365.

Maass and McIntosh discuss the basic properties of oxygen: compounds of the halogen acids with benzene derivatives containing oxygen.—*Ibid.* pp. 70-71.

Baskerville, Chas., in an article on the chemistry of anæsthetics, discusses the use of oxygen in connection with anæsthetics, the sources of commercial oxygen, and the impurities that have been found.—*J. Frankl. Inst.* 1911, v. 172, pp. 139-141.

Warburg, Otto, reports observations on the influence of oxygen on the living cell.—*Ztschr. physiol. Chem.* 1910-11, v. 70, pp. 413-432. See also v. 71, pp. 479-484.

Franklin, Milton W., calls attention to the possibilities of ozone as a powerful and rapid disinfectant and promises a further report on its therapeutic applications.—*N. York M. J.* 1911, v. 93, p. 672.

Hooker, D. R., experimenting upon the chemical regulation of vascular tone, as studied upon the perfused blood vessels of the frog, finds that vascular tone is increased by calcium ions and oxygen.—*Am. J. Physiol.* 1911, v. 28, pp. 361-367.

Benedict and Higgins discuss the effects on men at rest of oxygen rich gas mixtures, together with oxygen therapy and suggestions for further research.—*Ibid.* pp. 1-28.

PANCREATINUM.

Zimmerman, A., reports a number of laboratory studies of combinations of pepsin and pancreatin, and concludes that these ferments exercise no destructive action upon one another, and that with the proper degree of acidity they can be kept in the same solution permanently, the loss of activity noted by other observers having been due entirely to the reaction of the solution and to the degree of such reaction.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 750-753.

He also reports (Laboratory, Digestive Ferments Co., Chicago) observations on the accelerating action of HCl upon the starch converting properties of pancreatin and malt.—*Ibid.* pp. 823-826.

Gramenitzki, M. J., in a report on the influence of temperature on ferments and regeneration of ferment properties, discusses the regeneration of the diastatic properties of pancreatin.—*Ztschr. physiol. Chem.* 1910, v. 69, pp. 286-300.

de Souza, D. H., presents a contribution on protection of trypsin from destruction by heat.—*J. Physiol. Lond.* 1911-12, v. 43, pp. 374-378.

Berczeller, L., discusses the solubility of pancreatic lipase.—*Biochem. Ztschr.* 1911, v. 34, pp. 170-175.

Michaelis and Davidsohn report a study on trypsin and pancreas nucleo-protein, in which they discuss the chemical properties of purified trypsin.—*Ibid.* v. 30, pp. 481-504.

Graber, Howard T., in a report on the assay of digestive ferments, states that the pharmacopœial assay which measures the amylolytic strength, gives very satisfactory and concordant results, providing the same kind of starch is used. The tryptic strength can be of value only in the preparation of predigested foods. An assay which measures the strength of steapsin, the fat splitting enzyme present in pancreatin, is also outlined.—*J. Ind. & Eng. Chem.* 1911, v. 3, p. 920.

Ramsay, Clarence F., outlines a new and accurate method for determining the tryptic value of pancreatin, which determines the amount of pancreatin necessary to peptonize a given quantity of milk in fifteen minutes.—*Ibid.* pp. 822-823.

Weinstein, Joseph, reports on 4 samples of pancreatin, 2 of which failed to come up to the U. S. P. test.—*Proc. New York Pharm. Assoc.* 1911, p. 150.

Smith, Kline & French Co. (Analytical Report, 1911, p. 37) reports that 15 samples of pancreatin were assayed. All samples met the U. S. P. requirements for strength, with the exception of one. This sample was rejected on account of its disagreeable odor and low strength. See also *Proc. Pennsylvania Pharm. Assoc.* 1911, p. 127, and *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 346.

Street, John Phillips, reports on 13 samples of pancreatin, all of which were adulterated or below standard.—*Rep. Connecticut Agric. Exper. Sta. for 1910-11*, p. 581. See also pp. 573-577.

The Committee of Reference in Pharmacy (Third Report, p. 7) recommends a menstruum consisting of 90 per cent alcohol, 25 volumes; glycerin, 20 volumes; and water to make 100 volumes; for the extraction of the pancreas in the preparation of liquor pancreatis. See also *Pharm. J.* 1911, v. 87, p. 590.

An editorial (*J. Am. M. Assoc.* 1911, v. 56, p. 1657) calls attention to some of the dangers entailed by the use of pancreatic extracts.

Battelli and Stern discuss the action of trypsin on the several oxidation processes in the animal tissues.—*Biochem. Ztschr.* 1911, v. 34, pp. 263-274.

Nagao, Y., reports a comparative study of the action of pancreatin diastase on oat and on wheat starch.—*Ztschr. exper. Path. u. Therap.* 1911, v. 9, pp. 227-237.

Levene and Meyer report on the combined action of muscle plasma and pancreas extract on glucose and maltose.—*J. Biol. Chem.* 1911, v. 9, pp. 97–107.

Kirchheim, Ludwig, discusses the toxic properties of trypsin and its faculty of digesting living cells.—*Arch. exper. Path. u. Pharmacol.* 1911, v. 66, pp. 352–386.

Additional references on the chemistry and pharmacology of pancreatin and of trypsin will be found in *Zentralbl. Biochem. u. Biophysik*; *Ztschr. physiol. Chem.*; *Index Med.*; and *Chem. Abstracts*.

PARAFFINUM.

Weiser-Mata, J. (*Internat. Low Temp. Congr. Vienna, 1910*), has invented a method, called the pressure-sweating method, for separating oil from the "gatsch" or residual mixture of paraffin and oil obtained by subjecting the paraffin fraction (from the crude oil distillation) to a low temperature and passing it through a filter press.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 11.

Henderson, N. M., describes and illustrates an improved apparatus for refining paraffin wax.—*Ibid.* p. 269.

Wild, R. B., gives the melting point of hard paraffin as 55°.—*Brit. M. J.* 1911, v. 2, p. 161.

The Committee of Reference in Pharmacy (*Third Report*, p. 20) fixes the melting point of hard paraffin at 50° to 60°, and the test for acidity is made more definite.—See also *Pharm. J.* 1911, v. 87, p. 708.

Düsterbehn, F., in a review of the *Ph. Germ.* V points out that solid paraffin is described as ceresin, obtained from ozokerite. The melting point of the product is given as from 68° to 72°.—*Apoth.-Ztg.* 1911, v. 26, p. 234.

See also *Pharm. J.* 1911; v. 86, p. 582, and *Chem. & Drug.* 1911, v. 78, p. 260.

Wagenaar, M., discusses the reactions for foreign fats in wax, paraffin, spermaceti, and wool fat.—*Pharm. Weekblad*, 1911, v. 48, pp. 479–481.

Cherchefskey, N., presents a communication, with tabulated results, on the analysis of mixtures of ceresin and paraffin.—*Ann. chim. analyt.* 1911, v. 16, p. 456.

An editorial note (*Chem. & Drug.* 1911, v. 78, p. 289) quotes the report of the Registrar-General to the effect that in 1908 there were 2 poisonings from paraffin, by negligence or accident, and no suicides, as compared with 2 and 1, respectively, for 1909.

Semb, O. (*Norsk. Mag. Lægevid.* v. 72, No. 11), reviews the not altogether satisfactory history of injection of paraffin around the urethra.—*J. Am. M. Assoc.* 1911, v. 57, p. 1956.

PARALDEHYDUM.

The Committee of Reference in Pharmacy (Third Report, p. 21) recommends that the specific gravity of paraldehyde be given as 0.998 to 1.000 and the melting point as not under 10°; solubility in water, 1 in 9, and not more than 5 per cent should distill below 123°, the remainder between 123° and 125°.—See also Pharm. J. 1911, v. 87, p. 708.

Düsterbehn, F., in a review of the Ph. Germ. V, points out that paraldehyde is now described as a product containing 4 per cent acetaldehyde. The specific gravity is given as from 0.998 to 1.0 and the solidification point as from 6° to 7°.—Apoth.-Ztg. 1911, v. 26, p. 234.

See also Pharm. J. 1911, v. 86, p. 582, and Chem. & Drug. 1911, v. 78, p. 124.

Richter, R., discusses the testing of paraldehyde, and presents tables showing the reaction, specific gravity, boiling point, congealing point, solubility, and contaminations found in connection with different samples.—Pharm. Ztg. 1911, v. 56, pp. 536–537.

Ranson and Scott, in discussing the results of medicinal treatment in 1,106 cases of delirium tremens, state that paraldehyde has not been extensively used and practically nothing is said concerning it.—Am. J. M. Sc. 1911, v. 141, pp. 673–687.

An editorial note (Chem. & Drug. 1911, v. 78, p. 289) quotes the report of the Registrar-General to the effect that in 1909 there was 1 poisoning from paraldehyde, by negligence or accident.

PARAIRA.

An editorial note (Pharm. J. 1911, v. 87, p. 655) states that *paraíra brava* from Bahia is in the market, and, as the genuine root is almost unprocureable at the present time, it is desirable that this root should be chemically examined as to its percentage of pelosine.

Scholz, M., reports a study of the alkaloids of *paraíra*, in which he discusses the chemistry of chondrodine and of bebeerine.—Arch. Pharm. 1911, v. 249, pp. 408–418.

PEPO.

Power, F. B., states that pumpkin seeds were largely used in the United States as a remedy for tapeworm. A fatty oil obtained therefrom (19 per cent) and a resin (0.5 per cent of the seed) were administered to dogs in large doses (15 grains), but had no effect in the removal of tapeworms. Any value for this purpose must therefore be ascribed to mechanical action, and the seeds are not worthy of a place in a pharmacopœia.—Chem. & Drug. Australas. 1911, v. 26, p. 60. See also review by Puckner, Midl. Drug. 1911, v. 45, pp. 334–336.

Jones, Howard, fears the above may lead to the throwing aside of pumpkin seed which, after thirty-five years of general practice, he considers a very valuable and safe remedy.—*Midl. Drug.* 1911, v. 45, p. 455.

PEPSINUM.

An unsigned article (*New Idea*, 1911, v. 33, pp. 112–116) describes, with illustrations, the production of pepsin.

Porter, Agnes Ellen, reports a study on the question of the identity of pepsin and rennet.—*J. Physiol. Lond.* 1911, v. 42, pp. 389–401.

van Hasselt, J. F. B., presents an additional contribution to the pepsin-chymosin controversy.—*Ztschr. physiol. Chem.* 1910–11, v. 70, pp. 171–185.

See also Rakoczy, A., *ibid.* v. 73, pp. 453–458.

The Committee of Reference in Pharmacy (Third Report, p. 21) proposes a slightly modified monograph for pepsin. See also *The Pharmaceutical Journal* (1911, v. 87, p. 708) for comments on the preparation of the pepsin solution.

Düsterbehn, F., in a review of the Ph. Germ. V notes that pepsin is described as an enzyme obtained from the stomach of the hog, sheep, and calf and usually mixed with sugar or sugar of milk.—*Apoth.-Ztg.* 1911, v. 26, p. 234.

See also *Pharm. J.* 1911, v. 86, p. 654.

Portes criticizes the Ph. Fr. V method for the assay of pepsin and asserts that the temperature is a matter of considerable importance. Bourquelot suggests that it would be well to indicate a temperature of 15° to 20°.—*Répert. pharm.* 1911, v. 23, p. 187. See also *J. Pharm. et Chim.* 1911, v. 3, pp. 313, 341.

Schmidt, M. R., discusses the use of egg albumen as a standard in pepsin assay.—*Pharm. Era*, 1911, v. 44, p. 433.

Graber, Howard T., in a report on the assay of digestive ferments, states that egg albumen seems to be more difficult to digest the first twenty-four hours after the egg is laid, and a change gradually takes place until, after about five to seven days, it has reached its maximum solvent condition. After this period its digestibility gradually diminishes.—*J. Ind. & Eng. Chem.* 1911, v. 3, p. 921.

See also Dohme and Engelhardt, *Am. J. Pharm.* 1911, v. 83, p. 524.

Zimmerman, Albert, suggests the substitution of dry egg albumen for albumen coagulated in the egg, in order to secure greater accuracy in the U. S. P. pepsin assay.—*Pharm. Era*, 1911, v. 44, p. 432.

Frank, Philip, reports a study on the digestibility of white of egg, as influenced by the temperature at which it is coagulated.—*J. Biol. Chem.* 1911, v. 9, pp. 463–470.

Westhauser, F., discusses the pepsin digestion of albumen.—*Ztschr. physiol. Chem.* 1911, v. 72, pp. 363–373.

Mackay, Geo. J., discusses the proteolytic value of certain pepsin preparations, and points out that mixtures of bismuth and pepsin were found to be uniformly inert so far as any pepsin action was concerned.—*Chem. & Drug. Australas.* 1911, v. 26, p. 56. See also *Pharm. J.* 1911, v. 86, p. 268, and *Chem. & Drug.* 1911, v. 78, p. 314.

Merrillees, James, takes exception to criticisms by Mackay, that bismuth and alkalis have the property of inhibiting the proteolytic value of pepsin.—*Chem. & Drug.* 1911, v. 26, p. 97. See also p. 160, for reply by Mackay.

Hamburger, Walter W., contributes a chemo-biological study of the relations of pepsin to so-called antipepsin.—*J. Exper. M.* 1911, v. 14, pp. 535-549.

Pekelharing and Ringer discuss the electrical conductivity of pepsin.—*Ztschr. physiol. Chem.* 1911, v. 75, pp. 282-289.

Henriques and Gjaldbæk discuss the hydrolytic cleavage of protein, by the action of pepsin, trypsin, acids, and alkalis.—*Ibid.* pp. 363-409.

van Itallie, E. I., states that pepsin complying with the requirements of the Ph. Ndl. IV is not readily found on the market at the present time.—*Pharm. Weekblad*, 1911, v. 48, pp. 1034-1035.

Johannessen, L., reports a number of comparative examinations of commercial pepsin, by far the greater number of which were found to be below the potency claimed for them.—*Pharm. Zentralh.* 1911, v. 52, pp. 1268-1270.

Table showing some of the analytical results reported for pepsin.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Smith, Kline & French Co....	54	3	Analytical Report, 1911, p. 37.
Bernegau, L. H.....	61	0	Proc. Pennsylvania Pharm. Assoc. 1911, p. 127.
Pearson, W. A.....	2	2	<i>Ibid.</i> and Bull. Am. Pharm. Assoc. 1911, v. 6, p. 346.
Street, John Phillips.....	20	15	Rep. Connecticut Agric. Exper. Sta. 1911, p. 215. See also pp. 182-187.

Zimmerman, A., reports some laboratory studies of pepsin, pancreatin, and combinations of these ferments, and expresses the belief that the generally accepted statements relative to the incompatibility of pepsin and pancreatin in mixture are erroneous.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 750-753.

Bruder, Otto E., expresses the opinion that, as a general thing, the fewer liquid preparations of pepsin we have the better.—*N. A. R. D. Notes*, 1911-12, v. 13, p. 681.

Homm", P. E., reviews the N. F. pepsin preparations and recommends that the committee on National Formulary limit the number

of preparations of this type, so as to indicate those which possess evident therapeutic value and omit those whose utility is doubtful.—*Proc. New Jersey Pharm. Assoc.* 1911, pp. 83–84. Also *Pract. Drug.* 1911, v. 29, July, p. 30, and *Merck's Rep.* 1911, v. 20, pp. 301–302.

Pettigrew, H. P., urges pineapple juice as a vehicle for essence of pepsin.—*Bull. Pharm.* 1911, v. 25, p. 82.

Davies, John J., states that, for dispensing pepsin in the form of pills or capsules, he prefers to use granular pepsin, preferably of the insoluble variety.—*Drug. Circ.* 1911, v. 55, p. 568.

Hancock, James E., discusses the action of enzymes with special reference to the nature of pepsin.—*Am. J. Pharm.* 1911, v. 83, pp. 373–376. See also *Proc. Maryland Pharm. Assoc.* 1911, p. 66–69.

Burge, W. E., shows that, in a solution containing both pepsin and rennin, the passage of a direct current of 10 milliamperes for twenty-five hours results in a complete disappearance of the peptic power, while the action of the rennin is apparently unchanged.—*Am. J. Physiol.* 1911, v. 29, pp. 330–334.

Choay concludes, from his study of peptic and pancreatic digestion, that the predominant action of the gastric ferments is the solubilization of proteid matter.—*J. Pharm. et Chim.* 1911, v. 3, p. 191.

Liebmann, P., describes and illustrates a new method for the clinical estimation of pepsin.—*Pharm. Zentralh.* 1911, v. 52, pp. 746–747.

Abderhalden and Meyer present some observations on the determination of active pepsin in the intestine by means of the elastin.—*Ztschr. physiol. Chem.* 1911, v. 74, pp. 67–100; see also pp. 411–428, and v. 71, pp. 339–366, 449–454.

An unsigned article (*J. Therap. & Diet.* 1911, v. 5, pp. 317–320) declares that the introduction of pepsin as a remedial agent effected a complete revolution in the method of restoring to normal the ailments which in the old days were classed in a group as dyspepsia.

A number of additional references on the chemistry and pharmacology of pepsin will be found in *Index Med.*; *Chem. Abstr.*; *Zentralbl. Biochem. u. Biophysik*; and *Chem. Centralbl.*

PETROLATUM.

Le Roy, G. A., asserts that the index of refraction of different products of the petroleum industry may be utilized in differentiating the products and their origin. He gives a tabulated statement of the findings for American, Russian, and Roumanian products.—*Ann. chim. analyt.* 1911, v. 16, p. 12.

The Committee of Reference in Pharmacy (Third Report, p. 21) gives the melting point of soft paraffin as 36° to 40°, and it is required to evolve no unpleasant odor when heated to 80°. See also *Pharm. J.* 1911, v. 87, p. 708.

Wild, R. B., recommends narrower limits for the melting point of soft paraffin, and advocates two varieties, one 31°–34°, the other

37°–40°.—Pharm. J. 1911, v. 87, p. 131. See also p. 266, and Brit. M. J. 1911, v. 2, p. 161.

Hartwich, C., points out that *vaselinum album* and *vaselinum flavum* are two new titles included in the Ph. Germ. V. The melting point of the drug is permitted to range from 35° to 40°; in the Ph. Helv., 38° to 42°; Ph. Austr., 41° to 45°; Ph. Fr., 35° to 39°; Ph. Ndl., for white vaselin 40° to 41°, for yellow 38° to 40°.—Apoth.-Ztg. 1911, v. 26, p. 105.

See also Pharm. J. 1911, v. 86, p. 582; and Chem. & Drug. 1911, v. 78, p. 260.

Linke, H., reports that the determination of melting point of yellow vaselin, according to the method prescribed by the Ph. Germ. V, is not simple. Three samples examined by him complied with the Ph. Germ. V limitations for alkalis, acids, and saponifiable fats and resins.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 198–199.

Jönsson, August, reports examining a number of samples of vaselin and recommends that pharmacopœias include a definite degree of viscosity so as to avoid factitious products.—Svensk farm. Tidskr. 1911, v. 15, pp. 81–84; also Pharm. Ztg. 1911, v. 56, p. 253.

Murray, B. L., points out that the U. S. P. describes white petrolatum as “A colorless mixture of hydrocarbons;” and only three lines below as “A white unctuous mass.” It must be both white and colorless to be right.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 13.

Smith, Kline & French Co. (Analytical Report, 1911, p. 37) reports that 20 samples of white petrolatum were examined. All were of U. S. P. quality with the exception of melting point, which was too low. It is difficult or impossible to obtain a white petrolatum that is satisfactory in respect to consistency and melting point. See also Proc. Pennsylvania Pharm. Assoc. 1911, p. 127, and Bull. Am. Pharm. Assoc. 1911, v. 6, p. 346.

Lipowski, I. (Münch. med. Wchnschr. v. 57, No. 50), reports further success in the treatment of chronic constipation by the injection of soft paraffin.—J. Am. M. Assoc. 1911, v. 56, p. 313.

PETROLATUM LIQUIDUM.

Krajenski, F. (Seifensieder Ztg., 38, 539, 581), discusses the manufacture of white vaselin oils.—Chem. Abstr. 1911, v. 5, p. 3620.

The Committee of Reference in Pharmacy (Third Report, p. 20) gives the specific gravity of liquid paraffin as 0.860 to 0.885, instead of 0.0885 to 0.890, which would transfer official recognition to the rather lighter paraffin which is in general use. The boiling point is omitted, and the test for acidity made more definite. See also Pharm. J. 1911, v. 87, p. 708.

Düsterbehn, F., in a review of the Ph. Germ. V, points out that liquid paraffin is described as being insoluble in water, nearly insoluble

in alcohol, and miscible with ether and chloroform.—Apoth.-Ztg. 1911, v. 26, p. 233.

See also Pharm. J. 1911, v. 86, p. 582.

Smith, Kline & French Co. (Analytical Report, 1911, p. 37) reports that 23 samples of liquid petrolatum were all found to be of satisfactory quality as to odor and color. All samples failed to meet the U. S. P. requirements for specific gravity. The limits for gravity of all samples were 0.859–0.864.

The Biennial Report of the Inspection of Pharmacies, 1909–10, states that liquid paraffin is often insufficiently dense, sometimes fluorescent and possessing an odor of petroleum.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 231. See also J. Pharm. Anvers, 1911, v. 67, p. 520.

PETROLATUM SAPONATUM LIQUIDUM N. F.

Beringer and Beringer present a number of formulas for petrox preparations.—Am. J. Pharm. 1911, v. 83, pp. 213–223. See also Drug. Circ. 1911, v. 55, pp. 294–295, and Merck's Rep. 1911, v. 20, pp. 188–190.

McClurg, W. E., suggests the use of glycerin in a formula for iodine petrox.—Merck's Rep. 1911, v. 20, p. 287.

Lorenzen, J., points out that salicylic acid will not dissolve freely in vasolimentum, a preparation analagous to petrolatum saponatum N. F. He presents a formula in which he suggests the use of equal parts of absolute alcohol and of ether to effect solution.—Apoth.-Ztg. 1911, v. 26, p. 283.

PETROLATUM SAPONATUM SPISSUM N. F.

Raubenheimer, Otto, discusses the making of thick or solid petroxolin.—Am. J. Pharm. 1911, v. 83, pp. 223–224. See also Merck's Rep. 1911, v. 20, pp. 190–191.

PHENOL.

Lloyd, Gordon, states that phenol, or carbolic acid, was discovered in coal tar by Runge in 1834.—Rocky Mountain Druggist, 1911, v. 25, March, p. 43.

Beringer, George M., points out that the Ph. Germ. V still retains acidum carbolicum as the title for "phenol."—Am. J. Pharm. 1911, v. 83, p. 332. Also Proc. New Jersey Pharm. Assoc. 1911, p. 80.

Schmidt, Ernst, discusses some of the attacks that have been made on the pharmacopœial statement that phenol should react neutral with litmus paper, and points out that while ordinary crystalline carbolic acid does react distinctly acid with litmus paper, it is readily shown that this reaction is not due to phenol but to a contaminating acid.—Arch. Pharm. 1911, v. 249, pp. 236–240.

See also Raschig, Pharm. Ztg. 1911, v. 56, pp. 416, 517, and Schmidt, p. 453.

Düsterbehn, F., notes that the Ph. Germ. V now admits that phenol gradually assumes a red color on exposure to air. A deeply colored product is not to be used and the official article is to have a solidification point of from 39° to 41° , and not leave more than 0.1 per cent of residue.—Apoth.-Ztg. 1911, v. 26, p. 115.

See also Pharm. J. 1911, v. 86, p. 496.

An unsigned note (Pract. Drug. 1911, v. 29, Mar. p. 31) states that to decolorize reddened phenol, if not already a liquid, add water to liquefy, then agitate each liter of liquid with 3 gm. of white woollen threads and let stand several days. The threads are dyed carmine while the phenol becomes colorless.

The Paris Pharmaceutical Society suggests that the determination of the solidification point is practical, more easy and sure than the determination of the melting point.—J. Pharm. et Chim. 1911, v. 4, p. 539.

Tammann, G., discusses the stability requirements of the two crystalline varieties of phenol.—Ztschr. physik. Chem. 1911, v. 75, pp. 75–80.

Stüwe, W., calls attention to an error in the Ph. Germ. V sodium thiosulphate titration of phenol.—Apoth.-Ztg. 1911, v. 26, p. 677.

Lehmann, F., describes a simple method for the estimation of phenol.—*Ibid.* pp. 55–56.

Ditz and Bardach discuss the estimation of phenol and *p*-cresol in mixtures containing them.—Biochem. Ztschr. 1911, v. 37, pp. 272–312.

An unsigned article (Pharm. Zentralh. 1911, v. 52, pp. 1288–1290) calls attention to Zimmermann's dissertation on the quantitative estimation of phenol and paracresols in mixtures of the same.

Wilkie, John M., discusses the action of iodine on phenols and its application to their volumetric determination.—J. Soc. Chem. Ind. 1911, v. 30, pp. 398–402.

In a supplemental paper he outlines a sensitive test for the detection of phenol and salicylic acid.—*Ibid.* p. 402.

Dinwiddie and Kastle report some observations on the bromination of phenol.—Am. Chem. J. 1911, v. 46, pp. 502–508.

Bolle asserts that he has noted a distinct precipitation with bromine water in a solution of phenol 1:50,000. He also points out that a solution of phenol 1:15 turns blue litmus paper violet, not red, and the color is in no way comparable with the red produced by an acid.—Pharm. Ztg. 1911, v. 56, p. 545.

Dunlap, Renick W., reports that a sample of carbolic acid examined was not passed.—Rep. Ohio Dairy & Food Com. 1910–11, p. 47.

Puckner and Hilpert report a further examination of commercial tablets of bismuth, opium, and phenol, and present their findings in the form of a chart, showing the claimed and contained content of the

several ingredients.—Rep. Chem. Lab. Am. M. Assoc. 1911, v. 4, pp. 22–25; also J. Am. M. Assoc. 1911, v. 56, p. 1344.

Boa, Peter, makes some observations on a creosote and phenol pill.—Pharm. J. 1911, v. 87, p. 884; also Brit. & Col. Drug. 1911, v. 60, p. 529.

Diekman, George C., reports the opinion that ointment of phenol made with the old yellow wax, simple ointment of 1880 is far superior to that made with petrolatum.—Proc. New York Pharm. Assoc. 1911, p. 82.

Dalmahoy-Allan, J. C., publishes a brief warning as to the danger of carbolic acid ointment in hot climates.—Brit. M. J. 1911, v. 2, p. 827.

Brown, Everett J., reports a case of phenol gangrene, requiring amputation of the finger, in a boy of 5 years.—J. Am. M. Assoc. 1911, v. 57, p. 1613.

An editorial (Therap. Gaz. 1911, v. 35, pp. 266–267) states that phenol is commonly employed by suicides and is probably more frequently used than any other drug for this purpose.

An editorial note (Chem. & Drug. 1911, v. 78, p. 289) quotes the report of the Registrar-General to the effect that in 1908 there were 24 poisonings from carbolic acid, by negligence or accident, and 98 suicides, as compared with 18 and 103, respectively, in 1909.

Prinz, Hermann, discusses the fallacy of the antidotal properties of alcohol, and sodium or magnesium sulphate in phenol poisoning.—Dental Cosmos, 1911, v. 53, p. 1375.

Kojo, Kenji, discusses the influence of sulphur on the elimination of phenol.—Ztschr. physiol. Chem. 1911–12, v. 76, pp. 159–169.

Wood, Horatio C., Jr., in an article on the possibility of intestinal antiseptics, calls attention to the evident limitations of the use of phenol as an intestinal antiseptic.—Therap. Gaz. 1911, v. 35, pp. 153–156.

Herzog and Betzel report some observations on the disinfectant properties of phenol.—Ztschr. physiol. Chem. 1911, v. 74, pp. 231–239.

Bach, H., outlines a colorimetric method for the estimation of phenols in sewage.—Ztschr. anal. Chem. 1911, v. 50, pp. 736–740.

Liechti and Mooser discuss the estimation of phenols in the intestine of cattle.—Ztschr. physiol. Chem. 1911, v. 73, pp. 365–370.

Dettman reports the successful treatment of two cases of tetanus in the horse with carbolic acid.—Am. Vet. Rev. 1911, v. 39, p. 66.

Henry, J. Norman, in a report on the treatment of tetanus, includes a number of cases treated with hypodermic injections of carbolic acid.—Med. Rec. 1911, v. 80, pp. 720–722.

Rabe, R. P., states that carbolic acid is indicated in cases of headache, band around head; very offensive nasal catarrh.—Hahnemann Month. 1911, v. 46, p. 399.

A number of additional references on the chemistry, pharmacology, and therapeutic uses of phenol and related compounds will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Zentralbl. Biochem. u. Biophysik*; and *Chem. Centralbl.*

PHENOL LIQUEFACTUM.

Düsterbehn, F., notes that the Ph. Germ. V now requires a specific gravity of from 1.068 to 1.071 for liquefied phenol. He also comments on the assay process to determine the cresol content.—*Apoth.-Ztg.* 1911, v. 26, p. 115.

Linke, H., states that the Ph. Germ. V liquefied phenol is now permitted to be slightly red. He also comments on the method of estimating phenol now included in the *Pharmacopœia*.—*Ber. pharm. Gesellsch.* 1911, v. 21, pp. 181–182.

PHENOLPHTHALEIN.

Düsterbehn, F., in a review of the Ph. Germ. V, points out that phenolphthalein is described as a yellowish-white powder which dissolves in 12 parts of alcohol but is nearly insoluble in water and melts at 260°. The melting point is usually given in the literature as from 250° to 253°.—*Apoth.-Ztg.* 1911, v. 26, p. 241. See also *Pharm. J.* 1911, v. 86, p. 582.

Craig, Hugh, reports the suggestion that the melting point of phenolphthalein be carefully determined; also that the sulphonated salt be given official recognition.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 607.

Zotier, V. (*Bull. Soc. chim. France* (4), 7, 993–995), outlines a method for the volumetric estimation of phenolphthalein.—*Apoth.-Ztg.* 1911, v. 26, p. 8.

Kober and Marshall present a contribution on phenolphthalein and its colorless salts.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 59–70.

Cummings, L. F., finds a mixture composed of 1 ounce of chocolate, 15 ounces of syrup of acacia, 10 grains salicylic acid, and 128 grains of phenolphthalein, a very effective laxative.—*Pract. Drug.* 1911, v. 29, Feb., p. 35.

Leverone, Louise N., states that the purgative action of phenolphthalein is rather slow and uncertain, and takes place in about six hours after its administration.—*J. Therap. & Diet.* 1911, v. 5, p. 301.

An unsigned note (*J. Am. M. Assoc.* 1911, v. 57, p. 234) calls attention to Zabel's report (*Deutsche med. Wchnschr.* Apr. 20, 1911) of a case of poisoning by "purgen" (phenolphthalein).

Bartholomew, H. S., calls attention to the fact that phenolphthalein may cause pink stools.—*J. Am. M. Assoc.* 1911, v. 56, p. 367.

Boas, J. (*Deut. Med. Wchnschr.* 1911, p. 62), discusses the use of phenolphthalein as a reagent for occult blood in *fæces*.—*Apoth.-Ztg.* 1911, v. 26, p. 58.

Sartory, M. A., discusses the detection of blood by means of Meyer's phenolphthalein reaction.—Pharm. Post, 1911, v. 44, pp. 903-904.

Rupp, E., discusses the chemistry of phenolphthalein derivatives and their properties as indicators.—Arch. Pharm. 1911, v. 249, pp. 56-58.

Eisenbrey, A. B., concludes that the phenolsulphonophthalein test of Rowntree and Geraghty is one of the most satisfactory and at the same time most delicate methods of estimating the functional activity of the kidney.—J. Exper. M. 1911, v. 14, pp. 462-475.

See also Austin and Eisenbrey, *Ibid.* pp. 366-376; and Boston M. & S. J. 1911, v. 165, pp. 549-561.

A number of additional references on the chemistry, pharmacology, and therapeutic uses of phenolphthalein will be found in Index Med.; J. Am. M. Assoc.; Chem. Abstr.; Zentralbl. Biochem. u. Biophysik; and Chem. Centralbl.

PHENYLIS SALICYLAS.

An editorial (Pharm. Ztg. 1911, v. 56, p. 572) points out that the Ph. Germ. V includes salol as a synonym for phenylum salicylicum.

The Committee of Reference in Pharmacy (Third Report, p. 27) suggests for the solubility of salol one in 15 parts of 90 per cent alcohol. See also Pharm. J. 1911, p. 710.

Düsterbehn, F., in a review of the Ph. Germ. V, points out that phenol salicylate is described as being readily soluble in chloroform and very soluble in ether.—Apoth.-Ztg. 1911, v. 26, p. 241.

Tachau, Hermann, reports finding phenol and salicylic acid in the perspiration of patients taking salol.—Arch. exper. Path. u. Pharmacol. 1911, v. 66, p. 341.

Denarié (Sem. méd. Nov. 23, 1910) discusses the treatment of gastric ulcer by salol.—Bull. sc. pharmacol. 1911, v. 18, p. 448.

Wood, Horatio C., Jr., in an article on the possibility of intestinal antisepsis, calls attention to the evident limitations of the use of phenyl salicylate as an intestinal antiseptic.—Therap. Gaz. 1911, v. 35, pp. 153-156.

PHOSPHORUS.

Cohen and Olie, Jr., report a physico-chemical study of phosphorus. They conclude that phosphorus occurs in 2 allotropic modifications which may be considered as being dynamically allotropic.—Ztschr. physik. Chem. 1910, v. 71, pp. 1-27.

Bowser, L. T., reports an experimental study of the different procedures advanced for the determination of phosphorus in small amounts and outlines a titrimetric method which was found to give satisfactory results.—Am. Chem. J. 1911, v. 45, pp. 230-237.

The Committee of Reference in Pharmacy (Third Report, p. 23) recommends that in the phosphorus pills oil of theobroma and lanolin take the place of wax and lard; and kaolin and exsiccated sodium sulphate be used for massing instead of kaolin and gum acacia. See also *Pharm. J.* 1911, v. 87, p. 709.

An editorial (*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 1-3) discusses the phosphorus match industry and outlines the history of the development of chemical and friction matches.

An unsigned note (*Drug. Circ.* 1911, v. 55, p. 76) points out that the manufacture and sale of white phosphorus matches in Great Britain is prohibited by a law which came into force January 1, 1910.

Ivy, Robert H., discusses the prevention of industrial phosphorus poisoning.—*J. Am. M. Assoc.* 1911, v. 56, p. 1018. See an editorial criticism, p. 1038.

Opie, Barker, and Dochez discuss changes in the proteolytic enzymes and antienzymes of the blood serum produced by substances (chloroform and phosphorus) which cause degenerative changes in the liver.—*J. Exper. M.* 1911, v. 13, pp. 162-185.

Frank and Isaac report observations on the nature of the metabolic disturbances in cases of phosphorus poisoning.—*Arch. exper. Path. u. Pharmakol.* 1910-11, v. 64, pp. 274-292.

Tidy, H. Letheby, presents a note on the relation of acute phosphorus poisoning to acidosis.—*Lancet*, 1911, v. 180, p. 19.

Day, John Roberson, states that phosphorus 6 or 3 will always be associated with pneumonia. It follows bryonia and is complementary to it.—*Hahnemann. Month.* 1911, v. 46, p. 155.

Fisher, Edgar A., states that phosphorus divides the honors with bryonia in the treatment of pneumonia, and is more useful where there is less involvement of the pleura and the catarrhal symptoms are more marked, and particularly valuable for delicate patients when the disease comes on insiduously.—*J. Therap. & Diet.* 1911, v. 5, p. 201.

Royal, George, gives phosphorus for a chronic degenerative nephritis: Urine phosphorescent, loaded with fatty casts, blood; burning in the region of the kidneys; often a white sediment; disturbances of vision and retinitis albuminurica. The stool is usually soft and mushy with particles resembling fat upon it. The face is pale, sunken, and sickly in appearance.—*Hahnemann. Month.* 1911, v. 46, p. 557.

An unsigned abstract (*Iowa Med. J.*) states that a dry, rough, hoarse cough, with tightness or oppression of the chest and spurting of urine during the cough, are indications for phosphorus. Phosphorus has two marked aggravations—first, talking, laughing, and singing; second, going from warm into cold air.—*J. Am. Inst. Homœop.* 1911, v. 3, p. 76.

Additional references on the chemistry, pharmacology, and therapeutic uses of phosphorus will be found in Index Med.; J. Am. M. Assoc.; Chem. Abstr.; Zentralbl. Biochem. u. Biophysik; and Chem. Centralbl.

PHYSOSTIGMA.

Lloyd, John Uri, presents a brief historical note on physostigma, which he says was introduced to England by F. W. Daniel about 1840.—Bull. Lloyd Libr. 1911, No. 18, p. 63; also Spatula, 1910-11, v. 17, p. 407.

Tunmann, O., states that the chief source of production of calabar beans is the region surrounding the mouth of the Niger and the lower portion of the Calabar river.—Apoth.-Ztg. 1911, v. 26, p. 568.

Salway, Arthur Henry, reports a chemical examination of calabar bean and points out that calabar bean (*Physostigma venenosum* Balfour) contains, in addition to some essential oil, resin, and other amorphous substances, the following compounds: Physostigmine, physovenine, eseramine, calabarol, trifolialol, stigmasterol, sitosterol, glycerides of behenic, stearic, palmitic, oleic, and linolic acids, and a sugar yielding *d*-phenylglucosazone.—J. Chem. Soc. Lond. 1911, v. 99, pp. 2148-2159. See also Chem. & Drug. 1911, v. 79, p. 790.

Rosenthaler, L., calls attention to and describes the crystals obtained from physostigma by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, p. 345.

Dohme and Engelhardt think that slight modifications in the assay processes for physostigma and its preparations should be made.—Am. J. Pharm. 1911, v. 83, p. 524.

Noyes, C. R., points out that the U. S. P. requires physostigma to contain 0.15 per cent and tincture of physostigma 0.014 per cent of alkaloids soluble in ether.—Proc. Minnesota Pharm. Assoc. 1911, p. 77.

Vanderkleed, Chas. E., reports on 1 assay of calabar bean 0.200 per cent physostigmine.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

Allen and Brewis find for extract of physostigma 9.51 per cent of moisture, dried at 100-105°, and 1.27 per cent ash.—Pharm. J. 1911, v. 87, p. 172. See also Chem. & Drug. 1911, v. 79, p. 214.

PHYSOSTIGMINÆ SALICYLAS.

Düsterbehn, F., in a review of the Ph. Germ. V, points out that the melting point of physostigmine salicylate is given as about 180°. At 100° the substance should not lose weight.—Apoth. Ztg. 1911, v. 26, p. 241. See also Pharm. J. 1911, v. 86, p. 582.

Utech, P. Henry, suggests that to avoid the coloration of eserine salts the inner surface of the container, which is to be kept in a dry closet, be coated with paraffin.—Western Druggist, 1911, v. 33, p. 14.

Schenck, B. R., recommends the use of physostigmine combined with morphine in the treatment of pain following abdominal operations.—*J. Am. M. Assoc.* 1911, v. 57, p. 1392.

Kratter, Julius, reports a fatal case of physostigmine poisoning.—*Pharm. Post*, 1911, v. 44, pp. 826–827.

PHYTOLACCA.

Schneider, Albert, outlines the histology of phytolacca root and states that it is not unlike that of belladonna.—*Merck's Rep.* 1911, v. 20, p. 3.

Holm, Theo., presents a supplementary note on the stem structure of phytolacca.—*Ibid.* p. 218.

Wood, H. C., Jr., reports that in the opinion of the committee of the Philadelphia Branch of the American Pharmaceutical Association phytolacca seems of too little importance to require physiologic standardization.—*J. Am. M. Assoc.* 1911, v. 56, p. 606.

Harvey, G. W., states that phytolacca given to a woman with a tumor in the breast, which has not positively developed into a cancer, will cause it to gradually disappear, to the astonishment of the surgeon who said that it "could not be removed save by the surgeon's knife."—*Hahnemann. Month.* 1911, v. 46, p. 637.

Lloyd, John Uri, in an outline of the history of phytolacca, asserts that to cite American references to this drug would be to name all publications of the liberal authors connected with medicines.—*Bull. Lloyd Libr.* 1911, No. 18, p. 64; also *Spatula*, 1910–11, v. 17, p. 407.

PILOCARPINÆ HYDROCHLORIDUM.

Dästerbehn, F., in a review of the Ph. Germ. V, points out that the melting point of pilocarpine hydrochloride is now given as approximately 200°. According to Jowett it ranges from 204° to 205°.—*Apoth. Ztg.* 1911, v. 26, p. 241. See also *Pharm. J.* 1911, v. 86, p. 582.

Poulenc, Camille, reports a suggested correction in the Codex description of pilocarpine, namely, that it is soluble in water and in benzene.—*J. Pharm. et Chim.* 1911, v. 4, p. 539. See also p. 540.

Kiczka, M., reviews the chemistry of the pilocarpus alkaloids and discusses the structural relations of pilocarpine and isopilocarpine.—*Pharm. Prax.* 1911, v. 10, pp. 308–309.

Ewing, E. M., reports observations on the effects of pilocarpine and atropine upon the amylolytic power and composition of the saliva.—*J. Pharmacol. & Exper. Therap.* 1911–12, v. 3, pp. 1–17.

Reid, John J., has found pilocarpine of exceptional value in the pruritus so often accompanying influenza, the pruritus of jaundice, and pruritus vulvæ. Atropine combined with pilocarpine checks the sweating and salivation, which otherwise are liable to occur.—*J. Am. M. Assoc.* 1911, v. 56, p. 1739.

Gaisböck, Felix, reports observations on the action of pilocarpine on the heart.—Arch. exper. Path. u. Pharmacol. 1911, v. 66, pp. 398–406.

Waterman, N., reports a number of experiments with pilocarpine and the selective action of this alkaloid on the autonomic nervous system.—Ztschr. physiol. Chem. 1910–11, v. 70, pp. 441–450. See also v. 72, pp. 131–139.

French, J. M., states that pilocarpine is the most potent known diuretic.—J. Therap. & Diet. 1911, v. 5, p. 144.

Witham, E., reports on the use of pilocarpine in a case of intestinal obstruction.—Ellingwood's Therap. 1911, v. 5, p. 136.

PILOCARPINÆ NITRAS.

The Paris Pharmaceutical Society suggests a change in the melting point from 177° to 175°, and a slight change in the statement as to aqueous solutions.—J. Pharm. et Chim. 1911, v. 4, p. 539.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 37) report that one only of the samples of pilocarpine nitrate examined gave a satisfactory melting point, viz., 172.5°, the others ranging from 165° to 170°.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 57) report on 1 old sample of pilocarpine nitrate which had a melting point of 168°, and estimated volumetrically only at 90 per cent.

PILOCARPUS.

Lloyd, John Uri, states that, although pilocarpus is mentioned in medical literature as early as 1643, it was not conspicuously introduced into medicine until 1874, when Coutinho called attention to its qualities as a sialogogue.—Bull. Lloyd. Libr. 1911, No. 18, p. 64.

Schneider, Albert, states that pilocarpus is very commonly adulterated with spurious jaborandis, other foreign leaves, stems, dirt, and musty or otherwise defective leaves, etc.—Merck's Rep. 1911, v. 20, p. 3.

Rusby, H. H., thinks that pilocarpus should be permitted to contain not more than 5 per cent of stems.—Pharm. Era, 1911, v. 44, p. 95.

Schneider, Albert, reports on a sample of pilocarpus which was adulterated with stem tissue, shells and sclerenchymatous tissue.—Pacific Pharm. 1911, v. 5, p. 180.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 114–115) discuss the valuation of pilocarpus, and present a table showing the requirements of this drug included in several pharmacopœias.

Dohme and Engelhardt suggest replacing the percolation process in the assay method for pilocarpus by the aliquot part method.—Am. J. Pharm. 1911, v. 83, p. 525.

Noyes, C. R., points out that the U. S. P. requires pilocarpus to contain 0.5 per cent and fluid extract of pilocarpus 0.4 per cent of alkaloids.—Proc. Minnesota Pharm. Assoc. 1911, p. 77.

Ferguson, George A., reports on 1 sample of pilocarpus, containing 0.676 per cent alkaloids.—Proc. New York Pharm. Assoc. 1911, p. 152.

Smith, Kline & French Co. (Analytical Report, 1911, p. 38) reports that 11 samples of pilocarpus were assayed; total alkaloids from 0.08 to 0.99 per cent. One sample was practically inert.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 41) report that a sample of *Pilocarpus microphyllus* yielded 0.53 per cent of alkaloids, and hope that in the next edition of the Ph. Brit. this variety of jaborandi will replace that at present official.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 39) report that 1 sample of liquid extract of jaborandi was found to contain 0.56 per cent by weight, or 0.41 per cent by titration, of alkaloids, when estimated by the U. S. P. process.

Smith, Kline & French Co. (Analytical Report, 1911, p. 24) reports that 2 samples of fluid extract of pilocarpus were assayed, containing 0.101 and 0.69 gm. alkaloids in 100 cc.

Coblentz, Virgil, reports that samples of fluid extract of pilocarpus, dispensed in various pharmacies in New York City, were all far below normal standards.—J. Ind. & Eng. Chem. 1911, v. 3, p. 540.

Leming, W., enumerates jaborandi among the remedies useful in acute cystitis.—Nat. Eclect. M. Assoc. Quart. 1910-11, v. 2, p. 209.

Jones, Eli G., recommends jaborandi for some women who have a nonperspiring skin, a dry mouth, and deficient glandular activity, and who suffer from scanty menstruation.—J. Therap. & Diet. 1911, v. 5, p. 167.

PILULE.

The Pharmaceutical Journal (1911, v. 87, pp. 408, 438) discusses the science and art of dispensing pills.

Grosh, Daniel M., describes the making of pills in a large way by the manufacturer, and points out that the modern pill machine is entirely automatic and requires no attention other than to supply it with material. Such a machine will produce upward of a million pills a day.—Merck's Rep. 1911, v. 20, p. 333.

Otto, E. (Münch. Med. Wchnschr. 1911, No. 33), discusses the making of pills, and states that pills, even freshly prepared pills, soon lose their plastic properties, become hard, and will frequently remain intact.—Pharm. Ztg. 1911, v. 56, p. 664.

Havenhill and Stevenson are quoted as stating that the results of their experiments tend to show that the rate of disintegration of pills depends primarily upon the composition, size, and coating, and that the age exerts only a slight influence.—Drug. Circ. 1911, v. 55, p. 630.

Woolsey, J. F., states that pills are still in large demand, although the business in this line is not increasing at the same ratio as the tablet business.—*Pharm. Era*, 1911, v. 44, p. 208.

Danzel (*Bull. comm. Apr. 1911*) presents a formula for a multiple pill excipient.—*Répert. pharm.* 1911, v. 23, p. 247.

Otto (*Münch. Med. Wchnschr.* 1911, No. 33) states that pills will remain in good condition and permanently soft if pure manna is used in their preparation.—*Pharm. Era*, 1911, v. 44, p. 488. Also Merck's *Ann. Rep.* 1911, v. 25, p. 302.

Parkes and Roberts contribute a brief note on the "pearl coating" of pills.—*Pharm. J.* 1911, v. 87, p. 320.

Puckner, W. A., reports an examination of commercial keratin, and points out that the available material does not comply with the claims made for it by manufacturers.—*Rep. Chem. Lab. Am. M. Assoc.* 1911, v. 4, pp. 121-123.

The Council on Pharmacy and Chemistry of the A. M. A. reports its refusal to continue keratin in N. N. R. because the available commercial product does not comply with the requirements that were made for it.—*Rep. Council Pharm. & Chem.* 1911, pp. 58-59.

PILULA FERRI CARBONATIS.

The Committee of Reference in Pharmacy (Third Report, p. 22) proposes a new formula for iron pills; the proportions of tragacanth and acacia in the pill should be somewhat reduced, and liquid glucose should be used instead of sirup and glycerin. See also *Pharm. J.* 1911, v. 87, p. 709.

Seel and Friederich, in a review of the iron preparations now used, report the examination of a number of samples of pills of ferrous carbonate. They point out the desirability of frequently examining these pills and assert that the Ph. Germ. V mass is readily oxidized.—*Ber. pharm. Gesellsch.* 1911, v. 21, pp. 126-134.

Parkes and Roberts present a note on the composition of Bland's pills, with tabulated results of the analysis of some 30 samples.—*Pharm. J.* 1911, v. 87, p. 320. Also *Analyst*, 1911, v. 36, p. 387.

PIMENTA.

Lloyd, John Uri, states that pimenta has long been used as a spice by the natives of Jamaica and other West India Islands, and was introduced into Europe early in the Sixteenth Century.—*Bull. Lloyd Libr.* 1911, No. 18, p. 64.

Tunmann, O., states that the pimenta tree of Mexico and of the northern portion of South America is now being extensively cultivated in Jamaica. The chief markets are London and Hamburg. He presents tables showing the imports and exports from Hamburg from 1900 to 1909.—*Apoth.-Ztg.* 1911, v. 26, p. 385.

Schneider, Albert, describes the structural characteristics and states that pimenta is adulterated with allspice refuse (tailings and screenings), allspice stems, clove stems, nut shells, olive pits, cocoanut shells, etc.—*Merck's Rep.* 1911, v. 20, p. 3.

Umney and Bennett report that 9 samples of pimenta yielded from 3.3 to 4.8 per cent of ether extract. They consider the ash limit of 5 per cent, as usually adopted, somewhat high.—*Drug. Topics*, 1911, v. 26, p. 148. See also *Pharm. J.* 1911, v. 86, p. 596, and *Chem. & Drug.* 1911, v. 78, p. 673.

Southall Bros. & Barclay (*Rep.* 1911, Birmingham, 1912, p. 18) report that 2 samples of powdered pimenta yielded 3.59 and 3.40 per cent of ash.

Schneider, Albert, reports on 22 samples of allspice, 9 of which, or 40.9 per cent, were adulterated with bran, curcuma, clove stems, etc.—*Pacific Pharm.* 1911, v. 5, p. 177.

PIPER.

Lloyd, John Uri, points out that pepper has been used as a spice and as a stomachic from very early time, and was well known to Theophrastus, Dioscorides, and other early writers.—*Bull. Lloyd Libr.* 1911, No. 18, p. 64.

Tunmann, O., in commenting on the drug trade of Hamburg, enumerates the following trade varieties of pepper: Tellichery, Singapore, Penang, and in recent years Muntok.—*Apoth.-Ztg.* 1911, v. 26, p. 385.

Gehe & Co. (*Handelsbericht*, 1911, p. 99) present tables showing the amount of pepper imported into Hamburg for the years 1907 to 1910.

Figart, D. Milton, reports exports from the Straits Settlements to the United States during the first quarters of 1910 and 1911, amounting, respectively, to 356 and 163 long tons of black pepper and 420 and 147 long tons of white pepper.—*Cons. & Tr. Rep.* 1911, June 23, p. 1310.

Rairden, B. S., reports that the exports of black pepper from Netherlands India to the United States during July, August, and September, 1911, amounted to 470,160 pounds.—*Ibid.* Dec. 13, p. 1319.

Figart, D. Milton, quotes the following figures as an average analysis of black Singapore pepper in 1898 and 1909:

	1898	1909
	Per cent.	Per cent.
Total ash.....	3.49	5.70
Insoluble ash.....	0.12	1.32
Volatile ether extract.....	1.06	1.39
Nonvolatile ether extract.....	38.51	.....
Crude fiber.....	11.04	12.73

—*Cons. & Tr. Rep.* 1911, June 9, p. 1082.

Oberndörfer, A., calls attention to requirements that have been proposed for black pepper, and points out that the method of preparing an article should not influence its acceptance so long as the article itself answers the purpose for which it is to be used.—*Ztschr. öffentl. Chem.* 1911, v. 17, p. 13.

Parry, Ernest J., presents an answer to the question, what is white pepper, with some interesting analytical data.—*Chem. & Drug.* 1911, v. 79, p. 167.

Schneider, Albert, states that black and white pepper are very extensively adulterated with a great variety of substances. The most common adulterants of black pepper are pepper refuse (tailings, screenings, and sweepings), long pepper, olive pits, nut shells, sand mineral, cornmeal, etc. The most common adulterants of white pepper are cornmeal, cereal, starches, etc.—*Merck's Rep.* 1911, v. 20, p. 3.

The Canadian Correspondent (*Chem. & Drug.* 1911, v. 79, p. 677) states that poivrette (ground olive stones) has lately been imported into Canada in large quantities, and the authorities are watching for its reappearance as an adulterant of pepper.

Bondil, F., presents a note on the detection of ground olive stones in pepper.—*Ann. Falsif.* 1911, v. 4, p. 36. Also *Répert. pharm.* 1911, v. 23, p. 207.

Garola and Braun present a note on the detection of olive pits in pepper.—*Ann. falsif.* 1911, v. 4, p. 467.

Bussard and Andouard describe and illustrate an adulterant of whole pepper.—*Ibid.* pp. 263-266.

Rosenthaler, L., calls attention to and describes the crystals obtained from pepper by pyroanalysis.—*Ber. pharm. Gesellsch.* 1911, v. 21, p. 345.

Dohme and Engelhardt think that the percentage of oleoresin in pepper should be determined.—*Am. J. Pharm.* 1911, v. 83, p. 525.

Arragon, Ch., outlines a new factor in the determination of the purity of pepper, depending on the iodine absorption power of the powdered pepper.—*Schweiz. Wehnschr. Chem. u. Pharm.* 1911, v. 49, pp. 46-47. See also *Ann. falsif.* 1911, v. 4, p. 103.

Schneider, Albert, reports on 30 samples of white pepper, 15 of which, or 50 per cent, were adulterated with cereal, and mineral, and bleached; also 41 samples of black pepper, 19 of which, or 46.3 per cent, were adulterated with cereal, refuse, bran, sand, and nut shells.—*Pacific Pharm.* 1911, v. 5, p. 177.

Notices of Judgment Nos. 835 and 1118, under the food and drugs act, deal with the adulteration and misbranding of pepper.

The Pharmaceutical Journal (1911, v. 66, p. 3) calls attention to a recent recommendation by James Sawyer (Prescriber) of *tinctura piperis nigri fortis*, for the treatment of drink craving, and discusses

the advantages of pepper over capsicum, and of the infusion as compared with the tincture.

PIX LIQUIDA.

Wild, R. B., states that the official tar ointment might be made softer with advantage; it is difficult to combine with other substances.—*Brit. M. J.* 1911, v. 2, p. 162. Also *Pharm. J.* 1911, v. 87, p. 132.

PLUMBI ACETAS.

Whitney, D. V., reports that a sample of lead acetate, marked pure, contained excess of carbonates, traces of iron, and small amounts of other impurities.—*Proc. Missouri Pharm. Assoc.* 1911, p. 96.

Prinz, Hermann, states that there is no reason to believe that lead acetate is an internal hæmostatic. It acts as an astringent and a styptic only when applied locally upon mucous surfaces.—*Dental Cosmos*, 1911, v. 53, p. 1374.

A number of references on plumbism from various causes will be found in *Index Med.*; *J. Am. M. Assoc.*; and *Chem. Abstr.*

PLUMBI IODIDUM.

Dunn, W. R., in a paper on home made chemicals, outlines a method of preparing lead iodide, by mixing boiling solutions of potassium iodide and lead nitrate.—*Brit. & Col. Drug.* 1911, v. 60, p. 57.

PLUMBI OXIDUM.

The Committee of Reference in Pharmacy (Third Report, p. 23) recommends a slight modification of the description of lead oxide, so as to include the powder as well as the scales, and of the tests so as to permit the presence of a little carbonate.—See also *Pharm. J.* 1911, v. 87, p. 709.

Reinherz, O., describes a method for making lead oxide (*S. Pope Eng. Pat.* 26,175, Nov. 12, 1909).—*J. Soc. Chem. Ind.* 1911, v. 30, p. 27. See also pp. 85, 956.

Kassner, Georg, discusses the oxidation of lead oxide under the influence of light and air.—*Arch. Pharm.* 1911, v. 249, pp. 22–30.

PODOPHYLLUM.

Lloyd, John Uri, states that mandrake or May apple was used by the North American Indians for various purposes. The Wyandottes used it as a drastic cathartic, from which the drug's harsher qualities were removed by roasting.—*Bull. Lloyd Libr.* 1911, No. 18, p. 65.

Schneider, Albert, describes the structural characteristics of podophyllum, and states that it may be adulterated with leaf stalks, dirt, and refuse. Quality often very inferior, badly cured, etc.—*Merck's Rep.* 1911, v. 20, p. 3.

Hooper, David, in the report of the Indian Museum dealing with the official year 1910-11, records that samples of the rhizomes of Indian podophyllum from Hazara and Kashmir yielded 11.7 resin, 9.1 moisture, 4.4 ash. One Kashmir sample (shade dried) yielded 13.9 resin, 8.7 moisture, 4.7 ash.—Brit. & Col. Drug. 1911, v. 60, p. 220.

Umney, John C., in a paper on *Podophyllum emodi*, expresses the belief that a podophyllotoxin assay should prove to be a reasonable method of judging of the value of the resin.—Am. J. Pharm. 1911, v. 83, p. 493.

He presents a further note on *Podophyllum emodi* and the relative medicinal value of the resins of the 2 species of podophyllum.—Year-Book of Pharmacy, 1911, pp. 388-392. See also Pharm. J. 1911 v. 87, p. 156; Chem. & Drug. 1911, v. 79, p. 205; and Lancet, 1911 v. 181, pp. 309, 320.

An unsigned review of the Ph. Germ V (Pharm. J. 1911, v. 86, p. 654) points out that an ash limit of 0.5 per cent is introduced.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for podophyllum: Water content, 10.07 per cent; ash content, 6.98 per cent; alkalinity of water soluble ash, 0.73 per cent; total alkalinity of ash, 3.88 per cent.—Proc. Ohio Pharm. Assoc. 1911, p. 70.

Rosenthaler, L., describes and illustrates the nature of the material obtained from podophyllum by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 533-535.

Dohme and Engelhardt report that mandrake with less than 4 or 4.5 per cent of resin is frequently met with on the market. An assay process for this drug, therefore, seems necessary.—Am. J. Pharm. 1911, v. 83, p. 525.

Pearson, W. A., reports that 2 samples of podophyllum assaying 4.35 and 4.3 per cent were below an arbitrary standard of 5 per cent podophyllin.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 127. Also Bull. Am. Pharm. Assoc. 1911, v. 6, p. 346.

Vanderkleed, Chas. E., reports 5 assays of mandrake; lowest 2.740 per cent, highest 4.900 per cent resin; 1 above and 4 below standard.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

Royal, George, enumerates podophyllum as one of the remedies which act upon the liver, particularly when stool is very profuse and watery, leaving in the diaper faecal matter resembling yellow corn meal, or a light colored constipated stool.—Hahnemann. Month. 1911, v. 46, p. 553.

POTASSA SULPHURATA.

Craig, Hugh, suggests the standardization of potassa sulphurata, and calls attention to its liability to deterioration and the simplicity of its manufacture.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 607.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 37) report that 1 parcel of sulphurated potash proved of unsatisfactory quality, containing but 38 per cent soluble in alcohol.

POTASSII ACETAS.

The Committee of Reference in Pharmacy (Third Report, p. 24) recommends that potassium acetate be required to contain at least 90 per cent of potassium acetate, $KC_2H_3O_2$, and to lose not more than 10 per cent of water when dried at 100° . See also Pharm. J. 1911, v. 87, p. 709.

Dichgans, H., criticizes the Ph. Germ. V methods for testing solution of potassium acetate.—Apoth. Ztg. 1911, v. 26, p. 379.

The Biennial Report of the Inspection of Pharmacies, 1909–10, calls attention to the neglect to preserve this hygroscopic salt in drying bottles.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 231; also J. Pharm. Anvers, 1911, v. 67, p. 520.

Abe, R. (Mem. Coll. Sci. & Eng. Imp. Univ. Kyoto, 1911, v. 3, pp. 211–215), discusses the solubility and transition point of hydrates of potassium acetate.—J. Soc. Chem. Ind. 1911, v. 30, p. 1249.

Lavenson, R. S., found that the administration of 3 drachms of potassium acetate daily for a period of two or three days to a normal individual increased the elimination of chlorides from 6 to 9 gm.—J. Am. M. Assoc. 1911, v. 57, p. 150.

POTASSII BICARBONAS.

The Committee of Reference in Pharmacy (Third Report, p. 24) recommends that potassium bicarbonate be required to contain at least 99 per cent of potassium bicarbonate, $KHCO_3$; both the gravimetric and the volumetric tests should be retained and corrected in accordance with the foregoing requirement. See also Pharm. J. 1911, v. 87, p. 709.

POTASSII BITARTRAS.

The Committee of Reference in Pharmacy (Third Report, p. 25) recommends that both synonyms for the acid potassium tartrate be deleted. The salt should contain at least 99 per cent of potassium tartrate of that formula and the volumetric figure should be corrected accordingly.

See also Pharm. J. 1911, v. 87, p. 709.

Düsterbehn, F., in a review of the Ph. Germ. V, points out that the solubility of potassium bitartrate at 15° is now given as 1:220, instead of 1:192.—Apoth. Ztg. 1911, v. 26, p. 243.

See also Pharm. J. 1911, v. 86, p. 582.

Moszczenski, J. B. (U. S. Pat. 1,000,433, Aug. 15, 1911), describes a process for the manufacture of cream of tartar.—J. Soc. Chem. Ind. 1911, v. 30, p. 1115.

Bachman, Gustav, reports that the 2 samples of potassium bitartrate analyzed by him were 98.1 and 98.5 per cent pure.—*Proc. Minnesota Pharm. Assoc.* 1911, p. 101.

The Biennial Report of the Inspection of Pharmacies. 1909-10, shows that cream of tartar is still contaminated with lime salts, though pharmacists at present demand a purified product.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 233, and *J. Pharm. Anvers*, 1911, v. 67, p. 521.

An editorial note (*Pharm. J.* 1911, v. 86, p. 616) states that, according to the report of the Local Government Board of Scotland, 6 out of 91 samples of cream of tartar were found to be adulterated.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 38) report that lead in no case exceeded 3 parts per million, and for arsenic 1.5 parts per million was the highest figure obtained.

POTASSII BROMIDUM.

Lloyd, Gordon, states that the bromides were first used as medicines by Balard in 1826.—*Rocky Mountain Druggist*, 1911, v. 25, Mar. p. 43.

The Committee of Reference in Pharmacy (Third Report, p. 24) recommends that the test for thiocyanates be deleted. Titration with silver nitrate should indicate at least 97 per cent of potassium bromide, KBr. See also *Pharm. J.* 1911, v. 87, p. 709.

Düsterbehn, F., states that the Ph. Germ. V now describes potassium bromide as occurring in colorless crystals or as a white crystalline powder, soluble in 1.7 parts of water.—*Apoth.-Ztg.* 1911, v. 26, p. 202.

See also *Pharm. J.* 1911, v. 86, p. 581, and *Chem. & Drug.* 1911, v. 78, p. 47.

Baxter, Gregory Paul, presents a table showing the changes in volume upon solution in water of potassium bromide.—*J. Am. Chem. Soc.* 1911, v. 33, p. 925.

Baxter, Boylston, Mueller, Black, and Goode, in a report on the refractive power of halogen salts; present a table showing the results of their observations with purified potassium bromide.—*Ibid.* pp. 901-922.

Rosenthaler, L., suggests the determination of bromides by a hydrargyrometric method, and reports a number of experiments which show fairly uniform results.—*Arch. Pharm.* 1911, v. 249, p. 257.

The Dow Chemical Co. says it sees no reason why potassium bromide should not be at least 99 per cent pure KBr, and if it is properly packed and properly handled after leaving the manufacturer, it should not contain more than 2 to 3 per cent of moisture.—*Chem. & Drug.* 1911, v. 79, p. 592.

Remington, Joseph P., asserts that it does not hurt potassium bromide to have a little salt in it, or a little sulphate or chloride or something which will not do any harm to a patient. If the Pharmacopœia requires it to be 100 per cent pure, it costs the public, the retail druggist, and the jobber about three times that of the pharmacopœial article, because to get out the last trace of impurities would require refining two or three times, and every time there is a great loss.—*Northwestern Druggist*, 1911, v. 12, Mar. p. 26.

Herting, Otto, outlines a method for the quantitative estimation of chlorides in bromides.—*Pharm. Ztg.* 1911, v. 56, pp. 253-254.

Evans Sons Lescher & Webb (*Analytical Notes* 1911, 1912, p. 58) report that a much discolored sample of potassium bromide was observed to whiten completely on exposure to a strong light, while not bleached by heat.

Pearson, W. A., reports that 2 samples of potassium bromide examined had an excessive alkalinity.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 346. See also *Proc. Pennsylvania Pharm. Assoc.* 1911, p. 127.

Diner, Jacob, suggests the use of citric acid to overcome the rather unpleasant taste of the bromides. He also points out that strictly fresh pineapple juice or the various soda water sirups made from fresh fruit are pleasant vehicles for the bromides.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 341. Also *Drug. Circ.* 1911, v. 55, p. 298.

Tachua, Herman, in a study on the elimination of medicaments in perspiration, was able to determine the presence of bromine in one case of a number examined, and concludes that bromides are eliminated in the perspiration, though in minute quantities.—*Arch. exper. Path. u. Pharmacol.* 1911, v. 66, p. 338.

Jennings, W. Oscar, condemns the routine administration of bromide and hyoscine in the treatment of drug addiction.—*Brit. M. J.* 1911, v. 2, p. 812.

Additional references on the pharmacology and therapeutics of potassium bromide will be found in *Index Medicus*.

POTASSII CARBONAS.

The Committee of Reference in Pharmacy (Third Report, p. 24) recommends that the synonym for potassium carbonate, "salt of tartar," be deleted. See also *Pharm. J.* 1911, v. 87, p. 709.

Smith, Kline & French Co. (*Analytical Report*, 1911, p. 38) reports that 4 of the 26 samples of potassium carbonate examined were rejected on account of an abnormal amount of heavy metals and moisture present.

Wijnne, A. J., reports that 2 samples of purified potassium carbonate were found to vary from 90.75 to 91.3 per cent in place of a

minimum of 95 per cent required by the Ph. Ndl. IV.—Pharm. Weekblad, 1911, v. 48, p. 136.

Jones, Eli G., prescribes kali carb., 3d x, for a patient who has stitching pains in the lower part of the right lung, with profuse expectoration of matter of puslike appearance.—J. Therap. & Diet. 1911, v. 5, p. 303.

Dewey, W. A., gives kali carbonicum 6, followed by tuberculinum 200 and lycopodium for threatened phthisis, profuse night sweats, loss of strength, and a deep brown pigmentation of the skin.—Hahne-mann. Month. 1911, v. 46, p. 631.

POTASSII CHLORAS.

Richards, Joseph W., outlines the electrolytic method for producing potassium chlorate.—Sc. Am. Suppl. 1911, v. 71, p. 50.

Norton, Thomas H., gives some account of the Carlson electrolytic method, by which potassium chlorate is produced in Sweden.—Cons. & Tr. Rep. Oct. 28, 1911, pp. 481-493.

Productes Chimiques Electroniques (Fr. Pat. 426,117, Feb. 16, 1911) describes processes and apparatus for the transformation of potassium chloride into potassium chlorate.—J. Soc. Chem. Ind. 1911, v. 30, p. 956.

The Committee of Reference in Pharmacy (Third Report, p. 24) recommends that potassium chlorate be required to contain at least 99 per cent of potassium chlorate, KClO_3 ; the solubility in boiling water should be omitted. See also Pharm. J. 1911, v. 87, p. 709.

Düsterbehn, F., points out that the Ph. Germ. V now gives the solubility of potassium chlorate in water as 1:17.—Apoth.-Ztg. 1911, v. 26, p. 202.

The Paris Pharmaceutical Society recommends a slight modification of the test for nitrates.—J. Pharm. et Chim. 1911, v. 4, p. 541.

v. Buttlar discusses the analysis of the chlorates. He uses magnesium hydroxide as the hydrolyzing medium.—Chem. Ztg. 1911, v. 35, p. 1374.

Schering, K., discusses the quantitative estimation of potassium perchlorate in potassium chlorate.—Pharm. Weekblad, 1911, v. 48, pp. 15-18.

Prinz, Hermann, points out that potassium chlorate has been introduced into therapeutics on the erroneous theory that it will decompose in the body and supply oxygen to the tissues.—Dental Cosmos, 1911, v. 53, p. 1373.

Scheid, M. M., reports a case of potassium chlorate poisoning in an infant 20 days old.—J. Am. M. Assoc. 1911, v. 57, p. 822.

Jefferies, J. P., states that the use of potassium chlorate in cases of repeated miscarriage is so little recognized that his success warrants a report of 2 cases.—Lancet, 1911, v. 180, p. 1133.

POTASSII CITRAS.

Dunn, W. R., in a paper on home-made chemicals, recommends the preparation of potassium citrate by neutralization and evaporation.—*Brit. & Col. Drug.* 1911, v. 60, p. 57.

POTASSII CYANIDUM.

Pearson, W. A., reports that 1 lot of technical cyanides assayed contained 19.3 per cent of potassium cyanide, and 78.78 per cent of sodium cyanide.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 123.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 58) report that a sample of 40 per cent grade was rejected on account of the very heavy sulphide content.

Ross and Edie recommend pills of 0.5 grain of cyanide of potassium made up with aerated soap or other floating material as a larvicide.—*Brit. M. J.* 1911, v. 2, p. 712.

Jona, J. L., recommends pituitary extract as more effectual, more reliable, and more permanent in its action than adrenalin as an antidote in cyanide poisoning. He thinks this sure antidote should always be at hand in workshops where cyanides are used.—*Pharm. J.* 1911, v. 86, p. 22.

A number of additional references on potassium cyanide will be found in *Index Medicus*.

POTASSII DICHROMAS.

The Committee of Reference in Pharmacy (Third Report, p. 24) recommends that potassium bichromate be required to contain not less than 99 per cent of potassium bichromate, $K_2Cr_2O_7$; the characters and tests should be much restricted. See also *Pharm. J.* 1911, v. 87, p. 709.

An editorial (*Ellingwood's Therap.* 1911, v. 5, p. 71) calls attention to the use of potassium bichromate in the treatment of phthisis.

French, J. M., recommends potassium bichromate as an alterative to mucous membranes, particularly of the respiratory tract.—*J. Therap. & Diet.* 1911, v. 5, p. 144.

Jones, Eli G., states that when a patient has a cold and can scarcely speak above a whisper bichromate of potash is the needed remedy.—*Ibid.* p. 137.

POTASSII ET SODII TARTRAS.

Sharp, Gordon, states that sodium potassium tartrate, Rochelle salt, was discovered in 1672 by one of the numerous clever apothecaries of Rochelle, Seignette by name, and he kept its composition a secret and drove a thriving trade in it.—*Drug Topics*, 1911, v. 26, p. 54.

Bowersox, Charles H., presents a brief note on the history of Rochelle salt.—*Western Druggist*, 1911, v. 33, p. 77.

Wiley, H. W., reports Rochelle salt as having been rejected because it contained suspended foreign material, giving turbid aqueous solution.—Ann. Rep. U. S. Dept. Agric. 1911, 1912, p. 437.

Lythgoe, Hermann C., reports that a sample of Rochelle salts was found to contain 88.73 per cent of sodium fluoride.—Rep. Massachusetts Bd. Health, 1911, p. 447.

POTASSII FERROCYANIDUM.

White, Edmund, describes potassium ferrocyanide and enumerates the tests for the article to be used as a reagent.—Pharm. J. 1911, v. 86, p. 208.

POTASSIUM GLYCEROPHOSPHATE.

E'We, Geo. E., reports that of 5 samples of 75 per cent potassium glycerophosphate examined none contained the stated amount of $K_2C_2H_3PO_6$, ranging from 68.42 to 73.0 per cent.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 127.

POTASSII HYDROXIDUM.

Barger reviews several recent contributions to the history of potash and the origin of the name.—Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, p. 48.

Krische, P., reviews the history of the German potash industry.—Chem. Ind. 1911, v. 34, pp. 173–182.

Herstein, B., discusses the possibility of securing potash from feldspar.—J. Ind. & Eng. Chem. 1911, v. 3, pp. 426–428.

The Committee of Reference in Pharmacy (Third Report, p. 23) recommends that caustic potash be transferred to the appendix; also that it contain at least 85 per cent of potassium hydroxide, KOH, and the titration test altered accordingly. See also Pharm. J. 1911, v. 87, p. 709.

Düsterbehn, F., points out that the Ph. Germ. V now requires that potassium hydroxide contain 85 per cent of KOH.—Apoth.-Ztg. 1911, v. 26, p. 202.

See also Pharm. J. 1911, v. 86, p. 581; and Chem. & Drug. 1911, v. 78, p. 47.

Linke, H., notes that the Ph. Germ. V minimum requirement of 85 per cent of KOH for potassium hydrate is more in accord with the commercially available product than was the Ph. Germ. IV requirement of 90 per cent.—Ber. pharm. Gesellsch. 1911, v. 21, p. 192.

The Paris Pharmaceutical Society recommends a reduction in strength from 90 to 85 per cent and a slight modification in the iron test.—J. Pharm. et Chim. 1911, v. 4, p. 541.

White, Edmund, describes potassium hydroxide and enumerates tests for the article to be used as a reagent.—Pharm. J. 1911, v. 86, p. 208.

Malfatti, Hans, presents some observations on the production of an alcoholic solution of potassium hydrate. He titrates the potassium hydrate with an equal quantity of freshly calcined lime in connection with a small amount of alcohol. The resulting magma is washed into a bottle with an additional quantity of alcohol and allowed to stand, with occasional shaking, until all of the potassium hydrate is dissolved.—*Ztschr. anal. Chem.* 1911, v. 50, pp. 692–693.

Lesage, P., discusses the use of caustic potash solutions for testing the germinative power of certain seeds.—*Compt. rend. Acad. Sc.* 1911, v. 152, pp. 615–617.

Biernacki, E., discusses the biological importance of potassium.—*Zentrbl. Physiol. u. Path. Stoffwechs.* 1911, v. 6, pp. 401–407.

Dixon, W. E., states that the amount of potash salts taken daily by the vegetarian far exceeds anything ever prescribed by the physician. Potassium and ammonium salts owe the lack of toxicity to their property of easy excretion.—*Pharm. J.* 1911, v. 87, p. 15.

POTASSIUM IODIDUM.

Lloyd, Gordon, states that iodide of potassium was first used in medicine by Coindet in 1821.—*Rocky Mountain Druggist*, 1911, v. 25, Mar., p. 43.

The Committee of Reference in Pharmacy (Third Report, p. 24) recommends that potassium iodide, dried at 100°, be required to contain at least 99 per cent of potassium iodide, KI; the volumetric figure should be corrected accordingly. See also *Pharm. J.* 1911, v. 87, p. 709.

An unsigned review (*Chem. & Drug.* 1911, v. 78, p. 47) states that according to the Ph. Germ. V potassium iodide should not immediately color moistened litmus paper violet blue.

White, Edmund, describes potassium iodide, enumerates the tests, and calls attention to the several trade varieties.—*Pharm. J.* 1911, v. 86, p. 208.

Baxter, Boylston, Mueller, Black, and Goode, in a report on the refractive power of halogen salts, present a table showing the results of their observations with purified potassium iodide.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 901–922.

Baxter, Gregory Paul, presents a table showing the changes in volume upon solution in water of potassium iodide.—*Ibid.* p. 926.

Parsons and Whittemore report observations on the equilibrium in the system, potassium iodide, iodine, and water.—*Ibid.* pp. 1933–1936.

Rosenthaler, L., suggests the determination of iodides by a hydraryrometric method, and reports a number of experiments which show fairly uniform results.—*Arch. Pharm.* 1911, v. 249, p. 258.

Smith, Kline & French Co. (Analytical Report, 1911, p. 38) reports that 8 of the 145 samples of potassium iodide examined were found

to contain a slight excess of alkali beyond the amount allowed by the U. S. P.

Utech, P. Henry, asserts that the addition of 2 per cent of sodium thiosulphate will aid in the keeping of solutions of potassium iodide.—*Western Druggist*, 1911, v. 33, p. 14.

Coblentz, Virgil, says there is no excuse for adding "hypo" to solutions of potassium iodide when prescribed by a physician, nor any other preservative without his knowledge.—*Pract. Drug*, 1911, v. 29, Apr., p. 29.

Dunn, W. R., in a paper on home-made chemicals, outlines a formula for ointment of potassium iodide, using lanolin and soft paraffin.—*Brit. & Col. Drug*, 1911, v. 60, p. 57.

Wild, R. B., states that potassium iodide ointment was recommended for scabies 50 or 60 years ago, but this use appears to have altogether disappeared. It might be deleted.—*Brit. M. J.* 1911, v. 2, p. 162. See also *Pharm. J.* 1911, v. 87, p. 133.

Diner, Jacob, states that the iodides are best administered in compound sirup of asarum, the small amount of ipecac present counteracting the untoward effect on the stomach.—*Drug. Circ.* 1911, v. 55, p. 293.

Coblentz, Virgil, reports that prescriptions for solutions of potassium iodide, filled in various pharmacies in New York City, were found to be from 12 to 70 per cent short.—*J. Ind. & Eng. Chem.* 1911, v. 3, p. 540.

Sellei, J. (*Deut. med. Wchnschr.* v. 37, No. 12), reports another case of acute thyroiditis, following 2 spoonfuls of a 5 per cent solution of potassium iodide.—*J. Am. M. Assoc.* 1911, v. 56, p. 1304.

Tachau, Hermann, reports on the elimination of potassium iodide in perspiration. In three experiments he was able to demonstrate the presence of potassium iodide in two cases.—*Arch. exper. Path. u. Pharmacol.* 1911, v. 66, p. 338.

Additional references on the chemistry, pharmacology, and therapeutic uses of potassium iodide will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Zentralbl. Biochem. u. Biophysik*; and *Chem. Centralbl.*

POTASSII NITRAS.

Stewart, Robert, discusses the occurrence of potassium nitrate in western America.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 1952-1954.

The Committee of Reference in Pharmacy (Third Report, p. 24) recommends that potassium nitrate be required to contain at least 99 per cent of potassium nitrate, KNO_3 , and the solubility in boiling water be omitted. See also *Pharm. J.* 1911, v. 87, p. 709.

Düsterbehn, F., states that the *Ph. Germ.* V now gives the solubility of potassium nitrate in water as 1:0.4.—*Apoth.-Ztg.* 1911, v. 26, p. 202.

See also *Pharm. J.* 1911, v. 86, p. 581, and *Chem. & Drug.* 1911, v. 78, p. 47.

White, Edmund, describes potassium nitrate, enumerates the several tests to which it should respond, and points out that the saltpetre of commerce is usually of fair purity.—*Pharm. J.* 1911, v. 86, p. 208.

Smith, Kline & French Co. (Analytical Report, 1911, p. 38) reports that 1 of the 6 samples of potassium nitrate examined was rejected on account of its color.

Burnett, J. A., calls attention to the use of potassium nitrate in the treatment of malaria.—*Phys. Drug. News*, 1911, v. 6, p. 170.

Caskie, William A., reports a case of poisoning by saltpetre.—*Brit. M. J.* 1911, v. 1, p. 1052.

Additional references on the chemistry, pharmacology, toxicology and therapeutic uses of potassium nitrate will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Merck's Ann. Rep.*; *Zentralbl. Biochem. u. Biophysik*; and *Chem. Centralbl.*

POTASSII PERMANGANAS.

Schütz, E., discusses the production of potassium permanganate on a large scale and presents several illustrations of the apparatus used.—*Ztschr. ang. Chem.* 1911, v. 24, pp. 1628-1631.

White, Edmund, describes potassium permanganate and enumerates the tests to which the article as a reagent should respond.—*Pharm. J.* 1911, v. 86, p. 250.

The Committee of Reference in Pharmacy (Third Report, p. 24) recommends that the formula be written KMnO_4 , and that it should be required to contain at least 99 per cent of potassium permanganate, KMnO_4 ; the titration figure should be altered accordingly. See also *Pharm. J.* 1911, v. 87, p. 709.

Merton, Thomas Ralph, reports observations on the absorption spectra of permanganates in certain solvents.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 637-639.

Hetper, Josef, reports observations on the action of potassium permanganate solutions on organic compounds.—*Ztschr. anal. Chem.* 1911, v. 50, pp. 343-370.

Thomlinson, J. C., states that potassium permanganate is a powerful oxidizing agent, and hence capable of destroying organic matter when applied in solution, when this organic matter would act as a pabulum for bacteria.—*Pharm. J.* 1911, v. 87, pp. 26-27.

The *Pharmaceutical Journal* (1911, v. 87, p. 730) notes the death at Gateshead of a 7-months infant through sucking potassium permanganate crystals.

The Berlin Correspondent (*Lancet*, 1911, v. 180, p. 907) calls attention to the report by Franz Cohn of a case of poisoning by potassium permanganate.

Attix, J. T., reports several cases of poisoning by potassium permanganate and discusses the use of sulphurous acid as an antidote.—Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 32–33. See also Am. Druggist, 1911, v. 58, p. 12; and Pharm. Era, 1911, v. 44, p. 22.

Buckle, L., reports the successful use of potassium permanganate as a hæmostatic in a case of obstinate bleeding after circumcision.—J. Am. M. Assoc. 1911, v. 56, p. 1262.

The Paris Correspondent (*Ibid.* p. 906) calls attention to a recent accident in some military maneuvers and notes the importance of avoiding the packing of glycerin and potassium permanganate near each other in sanitary stores.

Additional references on the chemistry, pharmacology, and therapeutic uses of potassium permanganate will be found in Index Med.; J. Am. M. Assoc.; Chem. Abstr.; and Chem. Centralbl.

POTASSII SULPHAS.

The Committee of Reference in Pharmacy (Third Report, p. 24) recommends that potassium sulphate be required to contain at least 99 per cent of potassium sulphate, K_2SO_4 , and that the gravimetric figure be altered accordingly. The solubility in boiling water should be omitted. See also Pharm. J. 1911, v. 87, p. 709.

White, Edmund, describes potassium sulphate, enumerates several tests for the substance, and calls attention to some of the trade varieties.—Pharm. J. 1911, v. 86, p. 250.

Vandavelde, A. J. J., reports a study on equilibrium in acid solutions of the salts of potassium, more particularly potassium sulphate, chloride, and nitrate.—Bull. Soc. chim. Belg. 1911, v. 25, pp. 373–393.

Mackay, G. M. J., reports observations on transference experiments with mixtures of potassium chloride and sulphate in aqueous solution.—J. Am. Chem. Soc. 1911, v. 33, pp. 308–319.

Wiley, H. W., reports potassium sulphate as having been rejected because it contained nitrogen.—Ann. Rep. U. S. Dept. Agric. 1911, 1912, p. 437.

PRUNUM.

Lloyd, John Uri, points out that the cultivated varieties of the prune tree probably originated in Greece. Pliny records the use of a laxative plum and the use of this fruit in confection probably antedates history.—Bull. Lloyd Libr. 1911, No. 18, p. 65.

The Committee of Reference in Pharmacy (Third Report, p. 25) recommends that the words "and bland acidulous," referring to the taste of prune, be omitted. See also Pharm. J. 1911, v. 87, p. 709.

PRUNUS VIRGINIANA.

Lloyd, John Uri, states that the bark of the wild black cherry has been widely used in domestic medicine since the days of the Indian.

It has been recognized in the Pharmacopœia since the first edition of the work in 1820.—Bull. Lloyd Libr. 1911, No. 18, p. 66.

Schneider, Albert, states that wild cherry bark is not generally adulterated. Confusion may result because of the fact that the U. S. P. persists in publishing the wrong name, namely, *P. virginiana*, when *P. serotina* is the correct name for wild cherry.—Merck's Rep. 1911, v. 20, p. 3.

Lilly, J. K., reports that gatherers of wild cherry in their ignorance select the wrong portions of the correct plant and frequently market considerable quantities of the forbidden old bark mixed with the young bark.—Proc. N. W. D. A. 1911, p. 158.

The Committee of Reference in Pharmacy (Third Report, p. 25) proposes certain changes in the details of the description of wild cherry bark. See also Pharm. J. 1911, v. 87, p. 709.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for *prunus virginiana*: Water content, 9.46 per cent; ash content, 4.93 per cent; alkalinity of water soluble ash, 0.40 per cent; total alkalinity of ash, 8.54 per cent.—Proc. Ohio Pharm. Assoc. 1911, p. 70.

Bissell, W. B., suggests the use of 200 cc. of glycerin instead of 150 cc. in the formula for sirup of wild cherry.—Proc. New York Pharm. Assoc. 1911, p. 91.

Utech, P. Henry, has found that light exercises a detrimental influence on the keeping quality and remedial value of sirup of wild cherry. He has found it advantageous to keep the stock sirup in an amber-colored glass container.—Drug. Topics, 1911, v. 26, p. 278. Also Bull. Pharm. 1911, v. 25, p. 369.

Whorton, C., thinks it would be preferable to adopt the 1890 formula for sirup of wild cherry and put the glycerin into the menstruum before maceration and percolation. He thinks the tannin contained in the bark is of therapeutic advantage.—Proc. Alabama Pharm. Assoc. 1911, p. 95.

PULVERES.

The Pharmaceutical Journal (1911, v. 87, p. 440) discusses the science and art of dispensing powders.

Fendler, G. (Ger. Pat. 229,141, July 25, 1909), describes a process of converting liquids of all kinds, extracts, balsams, fats, waxes, and hygroscopic substances into impalpable powder.—J. Soc. Chem. Ind. 1911, v. 30, p. 73.

Planchon, Louis, urges pharmacists to make their own powders and presents a number of practical notes in support of his contention.—Bull. pharm. Sud-Est, 1911, v. 16, pp. 89-97.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that the degree of fineness of the different powders does not

always correspond to the requirements of the pharmacopœia.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 231; and J. Pharm. Anvers, 1911, v. 67, p. 520.

PULVIS ACETANILIDI COMPOSITUS.

Fussell, M. H. (Mo. Cyc. & Med. Bull. March), protests against the presence in the Pharmacopœia of such combinations as pulvis acetanilidi compositus.—J. Am. M. Assoc. 1911, v. 56, p. 1226.

The Chicago Branch, A. Ph. A., agreed that though compound acetanilide powder is occasionally prescribed it should be dropped from the Pharmacopœia.—Pharm. Era, 1911, v. 44, p. 257.

PULVIS ALOES ET CANELLE N. F.

An editorial note (Chem. & Drug. 1911, v. 79, p. 353) comments on D'Arcy Power's article (Brit. M. J.) on *hiera picra*.

PULVIS CRETÆ COMPOSITUS.

Diekman, George C., reports the suggestion that the cane sugar in the U. S. P. formula for compound chalk powder be replaced by the proper proportion of aromatic powder. A little saccharin or glycerin could take its place in chalk mixture.—Proc. New York Pharm. Assoc. 1911, p. 87.

PULVIS EFFERVESCENS COMPOSITUS.

Sharp, Gordon, makes a contribution on the history of Glauber's, Epsom, and Rochelle (Seidlitz or Seignette's) salts.—Pharm. J. 1911, v. 86, p. 33.

Caspari, Charles, Jr., reports the examination of 191 lots of Seidlitz powders; 111 illegal and 80 legal.—Proc. Maryland Pharm. Assoc. 1911, p. 96.

PULVIS GLYCYRRHIZÆ COMPOSITUS.

The Chicago Branch, A. Ph. A., recommends that powdered fennel be used instead of oil of fennel in compound licorice powder.—Pharm. Era, 1911, v. 44, p. 257.

Scott-Smith and Evans discuss the analytical and microscopical examinations of compound licorice powder and present several photomicrographs.—Analyst, 1911, v. 36, pp. 198–202. See also Chem. & Drug. 1911, v. 78, p. 513.

The Chemist and Druggist (1911, v. 78, p. 350) warns buyers to be careful in regard to the source of compound licorice powder, as some of it has been found which contains adulterants.

Coath, Lang, testified in a case under the Sale of Food and Drugs Act that a sample of compound licorice powder contained 5 per cent of ground almond shell.—Pharm. J. 1911, v. 86, p. 274.

POWDER OF TRAGACANTH COMPOUND.

Marquier, Adolph F., presents a formula for compound powder of tragacanth which he believes to be a useful agent with which to suspend insoluble powders.—Proc. New Jersey Pharm. Assoc. 1911, p. 96.

PYRETHRUM.

Lloyd, John Uri, states that pellitory or Spanish chamomile has long been known in different countries, under different names. Once a popular remedy in agues, it is now practically discontinued even in domestic medicine.—Bull. Lloyd Libr. 1911, v. 18, p. 66.

The Committee of Reference in Pharmacy (Third Report, p. 26) recommends certain additional details in the description of pyrethrum.

Schneider, Albert, states that pyrethrum roots contain yellow resin and sclerenchyma cells, but no bast or starch cells. Not generally adulterated.—Merck's Rep. 1911, v. 20, p. 3.

PYROGALLOL.

Düsterbehn, F., in a review of the Ph. Germ. V, points out that the solubility of pyrogallol in ether and in alcohol is now given as 1:1.5.—Apoth.-Ztg. 1911, v. 26, p. 241. See also Pharm. J. 1911, v. 86, p. 582.

The Paris Pharmaceutical Society suggests a modification in the statement as to the reaction of the aqueous solution, that it should be neutral or slightly acid to tournesol.—J. Pharm. et Chim. 1911, v. 4, p. 542.

PYROXYLINUM.

The Chicago Branch, A. Ph. A., calls attention to the difficulty in purchasing pyroxylin, because insurance regulations bar it from the wholesalers' stock.—Pharm. Era, 1911, v. 44, p. 257.

QUASSIA.

Sack, J., presents a communication on the history of quassia, with a portrait of the celebrated Graman Quacy, the slave who introduced quassia, and an illustration of the leaves and inflorescence of the plant, taken from a book by Carolus M. Blom. He also presents a table showing the amount of quassia exported from Surinam from 1848 to 1911, with the average price obtained, which varied from 2 to 20 cents per kg.—Pharm. Weekblad, 1911, v. 48, pp. 1152-1157, 1175-1186.

Lloyd, John Uri, outlines the history of quassia.—Bull. Lloyd Libr. 1911, No. 18, p. 66-67.

Harris, William, states that *Quassia amara* Linn., a native of Guiana, was the source of the original quassia of the materia medica,

and the one upon which the reputation of quassia as a medicine was established, but as the tree yielding it is small and of slow growth the supply was soon exhausted and Jamaican quassia or bitterwood is now used. Quassia amara was introduced to Jamaica by Nectoux, botanist to the French King at Hispaniola (Haiti) in 1779, but it is met with only as a garden plant.—Bull. Dept. Agric. Jamaica, 1911, v. 1, No. 4, p. 250.

Schneider, Albert, states that Surinam quassia shows some sclerenchyma cells from bark and medullary rays in two layers of cells. Not generally adulterated.—Merck's Rep. 1911, v. 20, p. 3.

Hartwich, C., does not think it proper to admit quassia of differing origin, points out that Surinam quassia contains up to four times the quantity of the bitter principle contained in Jamaica quassia, and reiterates his suggestion that only the Surinam drug be described in the Ph. Germ.—Apoth.-Ztg. 1911, v. 26, pp. 33–34.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 18) report that the ash yield from 3 samples of quassia powder ranged from 1.65 to 3.43 per cent.

The Council on Pharmacy and Chemistry of the A. M. A. reports that quassin was omitted from N. N. R. because it does not appear to be in sufficiently extensive use to justify its retention.—Rep. Council Pharm. & Chem. 1911, p. 64.

Joy, G. H., reports alarming symptoms of acute alcoholic poisoning in a child to whom he had administered concentrated infusion of quassia, and states that neither this nor the liquor quassiae concentratus should be so used.—Brit. M. J. 1911, v. 2, p. 52.

Stephenson, Thos., urges that physicians should add the word "recent" to insure the correct dispensing of their prescription.—*Ibid.* p. 95.

QUERCUS.

Lloyd, John Uri, states that the bark of the oak has ever been used in domestic medicine where an astringent material is applicable.—Bull. Lloyd Libr. 1911, No. 18, p. 67.

Schneider, Albert, states that quercus has sclerenchyma, bast and crystal bearing fibers.—Merck's Rep. 1911, v. 20, p. 3.

QUILLAJA.

Lloyd, John Uri, contributes a brief historical note on quillaja, named by Molina in 1782. First brought to this country by Ruschenberger, 1829.—Bull. Lloyd Libr. 1911, No. 18, p. 67. Also J. Therap. & Diet. 1911, v. 5, p. 228.

The Committee of Reference in Pharmacy (Third Report, p. 26) recommends the inclusion of a description of the microscopical characters of quillaja bark, and of an ash limit of 15 per cent. See also Pharm. J. 1911, v. 87, p. 709.

Schneider, Albert, states that quillaja has sclerenchyma and branching bast cells with numerous large prismatic crystals of calcium oxalate.—*Merck's Rep.* 1911, v. 20, p. 3.

QUININA.

The *Chemist and Druggist* (1911, v. 78, p. 358) quotes from "Teymannia" the statement that the name "quina" was originally applied in Middle and Northern South America to the pods of the Peruvian balsam tree and to that of a closely allied species, both kinds of pods being used in medicine under the name "pepitas de quinaquina." See also Xrayser II, p. 401.

Lloyd, Gordon, states that quinine, which is one of the two or three actual specifics for real diseases (in this instance malaria), was discovered by Pelletier and Caventou in 1820.—*Rocky Mountain Druggist*, 1911, v. 25, March, p. 43.

An editorial (*Chem. & Drug.* 1911, v. 79, p. 580) discusses the production of Java quinine.

An editorial (*Chem. & Drug.* 1911, v. 78, p. 84) reviews the Java bark and quinine situation, and states that much of the increased consumption is due to efforts to popularize the use of quinine in India as a result of the Malaria Conference of 1909.

Butler, W. G., states that quinine issued from Government factories in India is colored pink, in order to distinguish it from ordinary commercial quinine and to prevent fraud.—*Chem. & Drug.* 1911, v. 78, p. 236. Also *Brit. & Col. Drug.* 1911, v. 59, p. 123.

An editorial note (*Brit. & Col. Drug.* 1911, v. 59, p. 283) points out that it has been decided that in future all sulphate of quinine issued from Government factories in India shall contain not less than 95 per cent of quinine, equal to crystallized quinine sulphate containing 15.7 per cent of water and not more than 5 per cent of cinchonidine.

The *Chemist and Druggist* (1911, v. 78, p. 369) states that the Japanese imports of quinine salts amounted to 89,091 ounces in 1908, 119,062 in 1909, and 285,406 in 1910.

Thron, H. (U. S. Pat. 978,792, Dec. 13, 1910), describes a process for the production of quinine ester.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 109.

Dobbie and Lauder report observations on the absorption spectra of cinchonine, quinine, and their isomerides.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 1254-1261.

Rabe and Marschall report observations on the fluorescence phenomenon of quinine and other cinchona alkaloids.—*Ann. Chem.* 1910, v. 382, pp. 360-364.

Astruc and Courtin discuss the common and differential characters of quinine and euquinine.—*J. Pharm. et Chim.* 1911, v. 3, p. 292.

Kollo, Const., discusses the estimation of quinine in iron and quinine citrate.—*Pharm. Post*, 1911, v. 44, pp. 695-696.

Cockburn and Black discuss the estimation of quinine as the acid citrate in certain organic liquids.—*Analyst*, 1911, v. 36, pp. 396-398. Also *Pharm. J.* 1911, v. 87, p. 380.

Herzog, J., calls attention to the method of titrating quinine proposed by Katz, using Poirrier's blue as an indicator.—*Ber. pharm. Gesellsch.* 1911, v. 21, pp. 203-204.

An editorial note (*Brit. & Col. Drug.* 1911, v. 60, p. 388) calls attention to the fact that the Preanger Kinabond, of Bandoeng, Java, are offering a prize of 500 florins for a method giving the most accurate results in the determination of quinine in cinchona bark.

Street, John Phillips, reports the examination of 33 samples of 2-grain quinine pills. The quinine sulphate found ranged from 1.68 to 2.10 grains per pill by the gravimetric method, and from 1.54 to 2.07 grains by the volumetric method. Only 3 samples showed a deficiency greater than 10 per cent.—*Rep. Connecticut Agric. Exper. Sta.* 1911, pp. 187-188.

An editorial note (*Chem. & Drug. Australas.* 1911, v. 26, p. 296) suggests legal restrictions on the sale of quinine in powder form.

Molloy, John M., endorses the suggestion that the sale of quinine in powder form should be prohibited.—*Ibid.* p. 338.

An editorial (*Eclectic Med. Glean.* 1911, v. 7, p. 117) quotes Scudder as saying that if there is any medicine that might rival morphine in its misuses and abuses that agent is quinine. Not only do physicians misuse it, but the laity buy it, and use it for all manner of ills.

An Eastern Correspondent (*Chem. & Drug.* 1911, v. 79, p. 403) states that, at Colombo, a child of two years was poisoned by taking about fifteen quinine tablets which she thought were sweets.

An editorial (*Therap. Gaz.* 1911, v. 35, pp. 478-479) discusses the danger in the intravenous injection of quinine, and calls attention to a fatal case of poisoning.

Diner, Jacob, states that children will readily take quinine in sweetened or unsweetened milk.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 341.

An editorial note (*Lancet*, 1911, v. 180, p. 459) calls attention to the recent statement by W. E. Dixon that quinine is not in any sense a tonic; it is rather an atonic drug, a poison to all protoplasm and diminishes metabolism.

Jones, Eli G., states that quinine should never be given in the first stage of pneumonia. It is never indicated when the pulse is hard, skin dry and hot, and the tongue coated.—*J. Therap. & Diet.* 1911, v. 5, p. 167.

He also states that quinine is indicated in the night sweats which follow acute diseases.—*Ibid.* p. 368.

Herzfeld, A., contributes a brief note on quinine in the preventive treatment of migraine and anaphylaxis.—*J. Am. M. Assoc.* 1911, v. 57, p. 1712.

An editorial (*Brit. M. J.* 1911, v. 2, p. 390) calls attention to the work of D. Semple on the relation of tetanus to the hypodermic or intramuscular injection of quinine.

An editorial note (*Lancet*, 1911, v. 180, p. 457) states that the value of quinine as a local anæsthetic is only beginning to be recognized, and this is strange, for the drug itself has been known for 90 years. Attention is called to the recent work by Pleth and Pleth (*Am. J. Surg.* Jan.).

An unsigned note (*Boston M. & S. J.* 1911, v. 164, p. 800) states that an East Orange housewife, whose malarial husband had been benefited by quinine, administered a quinine pill every morning to her ailing hen, which now lays regularly 2 eggs a day.

A news note (*Pharm. J.* 1911, v. 87, p. 539) quotes from the *Veterinary Record* a case of fatal tetanus, brought about by hypodermic injections of quinine, in a horse.

A number of additional references on the chemistry, pharmacology, and therapeutic uses of quinine will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Zentralbl. Biochem. u. Biophysik.*; and *Chem. Centralbl.*

QUININE AND UREA HYDROCHLORIDE.

Craig, Hugh, reports the opinion that quinine and urea hydrochloride turns gray very quickly.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 607.

Boyd, William A., reports some observations on quinine and urea, its preparation, and its use as a local anæsthetic. He also presents a report of 10 cases in which the substance was used as the anæsthetic.—*Med. Rec.* 1911, v. 80, pp. 768-770.

Green, Winnifred, considers quinine and urea hydrochloride a valuable and safe local anæsthetic. He reports 8 cases and draws a number of conclusions.—*N. York M. J.* 1911, v. 93, pp. 884-886.

Prinz, Hermann, discusses the anæsthetic value of quinine and urea hydrochloride in dental operations and concludes that it possesses no advantage but many disadvantages, as compared with novocaine.—*Dental Cosmos*, 1911, v. 53, pp. 31-37.

QUININE BISULPHAS.

Mowry, A. E. (*Illinois M. J.*, August), has used quinine bisulphate irrigations in fourteen cases of acute gonorrhœal urethritis, and he says his results have been gratifying in most of the cases.—*J. Am. M. Assoc.* 1911, v. 57, p. 767.

QUININE HYDROCHLORIDUM.

Düsterbehn, F., points out that the *Ph. Germ. V* limits the loss in weight of quinine hydrochloride at 100° to a maximum of 9.1 per cent.

The substance is also directed to be kept protected from light.—Apoth.-Ztg. 1911, v. 26, p. 165.

See also Pharm. J. 1911, v. 86, p. 581.

André and Leulier assert that the specific rotatory power of the neutral quinine hydrochloride is increased by dilution, the Codex to the contrary notwithstanding.—J. Pharm. et Chim. 1911, v. 3, p. 186.

QUININE SALICYLAS.

Murray, B. L., points out that the U. S. P. requires quinine salicylate to be soluble in 77 parts of water. He states that there is no chance of conforming to this test, because quinine salicylate requires about 1,600 parts of water for solution.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 13.

Evans Sons Lescher & Webb (Analytical Notes 1911, 1912, p. 59) report on a sample of quinine salicylate which was found to contain 72 per cent of quinine.

QUININE SULPHAS.

Düsterbehn, F., notes that the Ph. Germ. V permits the presence of not exceeding 1 per cent of other alkaloids in quinine sulphate. He also states that this substance is efflorescent, but the loss on heating to 100° should not exceed 16.2 per cent.—Apoth.-Ztg. 1911, v. 26, p. 165.

See also Pharm. J. 1911, v. 86, p. 581.

The Biennial Report of the Inspection of Pharmacies notes the occurrence of quinine sulphate, poorly preserved and effloresced.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 234. Also J. Pharm. Anvers, 1911, v. 67, p. 522.

Dunlap, Renick W., reports that, of 2 samples of quinine sulphate tablets examined, 1 was not passed.—Rep. Ohio Dairy & Food Com. 1910, 1911, p. 48.

Böttcher and Horowitz report observations on the influence of sulphuric acid on the physical and chemical properties of quinine.—Monatsh. Chem. 1911, v. 32, pp. 793-796.

Robinson, Beverley, states that sulphate of quinine in moderate doses is of more value, and does less harm, than any other agent in prevention and helpfulness as regards obscure febrile disorders where there is suspicion of septicæmia.—Critic and Guide, 1911, v. 14, p. 338.

QUININE TANNATE.

Düsterbehn, F., points out that the Ph. Germ. V method for making quinine tannate is derived from the Ph. Hung. II, and is identical with that originally proposed by Rozsnyay. On heating to 100° the product should lose not more than 10 per cent in weight and on

incineration should leave not more than 0.2 per cent of ash.—Apoth.-Ztg. 1911, v. 26, p. 165.

See also Pharm. J. 1911, v. 86, p. 581.

Frerichs, G., discusses the nature of quinine tannate and reports on a sample which contained not over 11 per cent of quinine.—Apoth.-Ztg. 1911, v. 26, pp. 976-977.

The Council on Pharmacy and Chemistry of the A. M. A. discusses the requirements to be made for quinine tannate, and suggests a quinine content of not less than 29 per cent.—Rep. Council Pharm. & Chem. 1911, pp. 25-43.

Puckner, W. A., presents the report of the Council on Pharmacy and Chemistry on quinine tannate, with the tabulated results of analysis of several commercial specimens.—J. Am. M. Assoc. 1911, v. 57, p. 1303. Also Rep. Chem. Lab. Am. M. Assoc. 1911, v. 4, pp. 45-60.

Riedel's Berichte (1911, pp. 59-60) states that quinine tannate is being extensively used for the prevention of malaria. It is practically tasteless and in combination with chocolate can readily be administered to children.

RENNIN.

Porter, Agnes Ellen, in a study on the question of the identity of pepsin and rennet, reports observations on the antipeptic action of rennet preparations.—J. Physiol. Lond. 1911, v. 42, pp. 389-401.

Hedin, S. G., discusses the rennin zymogen of the calf's stomach.—Ztschr. physiol. Chem. 1911, v. 72, pp. 187-214.

Rakoczy, A., presents some additional observations on the chymosin and pepsin of the calf's stomach.—*Ibid.* v. 73, pp. 453-458.

Hammarsten, Olof, discusses the production of pepsin free chymosin solutions.—*Ibid.* v. 74, pp. 142-168.

Hedin, S. G., discusses the specific inhibition of rennin action.—*Ibid.* v. 74, pp. 242-253. See also *Ibid.* v. 76, pp. 355-368.

Graber, Howard T., in a report on the assay of digestive ferments, outlines his modification of the coagulation test for rennin.—J. Ind. & Eng. Chem. 1911, v. 3, p. 920.

RESINA.

The Secretary of Agriculture reports that the work on the misgrading of rosin has developed the fact that such misgrading is largely due to the practice of cutting the samples on which the rosin is graded too large, and also to the fact that the standard type samples, with which the rosin to be graded is compared, rapidly bleach out and become lighter in color under the severe climatic conditions existing in the South.—Ann. Rep. U. S. Dept. Agric. 1911, 1912, p. 83.

The U. S. Census Bureau reports (Board Tr. J. June 29, 1910) that the rosin production in the United States amounted to 1,906,000 casks, of 500 pounds each, in 1910, as compared with 1,828,000 casks in 1909; in 1910, 1,270,830 casks of rosin were exported.—J. Soc. Chem. Ind. 1911, v. 30, p. 908.

Parry, Ernest J., thinks that the characters for colophony should include acid value not below 150°, ester value not above 20, iodine value not below 115, unsaponifiable matter not exceeding 8 per cent.—Chem. & Drug. 1911, v. 78, p. 379.

An unsigned article (Bull. Imp. Inst. 1911, v. 9, pp. 10–11) reports the examination of a sample of rosin from India and points out that the sample was of good quality and while not quite so pale as the best Bordeaux rosin could be classed with the water white grades of American rosin.

Fahrion, W. (Chem. Rev. Fett-Ind. 1911, v. 18, pp. 239–242), criticizes, and suggests a modification of, the Twitchell method for the determination of rosin in fats.—J. Soc. Chem. Ind. 1911, v. 30, p. 1266. Also Apoth.-Ztg. 1911, v. 26, p. 861.

Hicks, Edwin F., outlines new color reactions for some of the resins with Halphen's reagent for colophony. First green, then rapidly blue and violet; latter lasts considerable time, then slowly changes to purple, and finally a deep indigo in all parts.—J. Ind. & Eng. Chem. 1911, v. 3, pp. 86–87.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 18) report that the acid values for 3 samples of colophony resin varied from 159.4 to 170.4.

RESINA JALAPE.

Gehe & Co. (Handelsbericht, 1911, p. 105) point out that the Ph. Germ. V includes tests for adulteration of resin of jalap with Orizaba resin, rosin and other resins, also for guaiac resin.

RESINA PODOPHYLLI.

The Committee of Reference in Pharmacy (Third Report, p. 23) states that in precipitating the resin 8 volumes of acidulated water should be used instead of 3. A satisfactory test for excluding Indian resin has not yet been devised, but experiments are in progress. See also Pharm. J. 1911, v. 87, p. 709.

An editorial (Eclectic Med. Glean. 1911, v. 7, pp. 140–144) calls attention to and reproduces a portion of the history of podophyllin published by John Uri Lloyd in 1893.

Murray, B. L., points out that the U. S. P. states that resin of podophyllum is "Soluble in alcohol in all proportions." In a subsequent line it states that "Not less than 99 per cent of resin of podophyllum should be soluble in alcohol. The solution should

be clear, or, at most, slightly opalescent."—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 14.

Hartwich, C., notes that the Ph. Germ. V now directs that podophyllin be made from the underground portion of the plant, and limits the ash content to 0.5 per cent.—Apoth.-Ztg. 1911, v. 26, p. 57.

Bernegau, L. H., reports that of 8 lots of podophyllin examined only 1 came up to the U. S. P. requirement of 99 per cent alcohol soluble resin. The others ranged from 92.2 per cent to 98.76 per cent. All tested within the 1 per cent ash limit of the U. S. P., ranging from 0.508 to 1 per cent ash.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 127.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 41) report that a sample of a large batch prepared in their laboratories from the rhizome of *Podophyllum peltatum* showed ash, 0.60 per cent; insoluble in 90 per cent alcohol, 1.36 per cent; insoluble in ammonia, 4.08 per cent.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 58) report a detailed examination of 2 samples of Peltatum resin, the acid value of which was found to be 174, 145.6; saponification value, 269.5, 264.6; ester value, 95.5, 119.0; and the iodine value, 55.5, 57.6; both were soluble in 90 per cent alcohol. A sample of "Emodum" resin was found to have the following constants: Acid value, 110.1; saponification value, 205.9; ester value, 95.8; and iodine value, 44.2.

Palmer, Chauncey D., states that podophyllin has been in use for many years by the majority of physicians. It has quite uniformly given satisfaction in cases where biliary secretions were much defective and the stools were clay colored.—Eclectic Med. Glean. 1911, v. 7, p. 592.

Heeve, William L., in chronic diarrhoea, gives minute doses of podophyllin, 3 to 5 grains of the second decimal for pasty tongue, fullness of tissues, gray or clay colored stools.—Nat. Eclect. M. Assoc. Quart. 1910-11, v. 2, p. 121.

RESINA SCAMMONII.

De Jonge, Cornelius, states that it is impossible to get virgin gum scammony and therefore impossible to manufacture the resin.—Pharm. Era, 1911, v. 44, p. 12.

The Committee of Reference in Pharmacy (Third Report, p. 29) proposes a monograph for scammony resin which recommends official recognition of Orizaba jalap as a source. See also Pharm. J. 1911, v. 87, p. 710.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 63) report on 11 samples of Orizaba jalap, which were found to contain 14.8 to 21.1 per cent resin.

Guigues, P., describes a new adulterant of scammony resin.—*Ann. falsif.* 1911, v. 4, p. 397. See also *Bull. sc. pharmacol.* 1911, v. 18, pp. 327-329.

Bourdet, L., criticizes the Ph. Fr. V requirements for scammony resin and suggests modifications thereof.—*J. Pharm. et Chim.* 1911, v. 4, p. 18.

RESORCINOL.

Düsterbehn, F., in a review of the Ph. Germ. V points out that the solubility of resorcinol in water and in alcohol is now given as 1:1.—*Apoth.-Ztg.* 1911, v. 26, p. 241.

Poulenc, Camille, reports a suggested correction of the melting point from 119° to 110-111°.—*J. Pharm. et Chim.* 1911, v. 4, p. 542.

Pence, C. M., reports a study of the bromine and iodometric methods for the determination of resorcinol.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 820-823.

Smith, Kline & French Co. (Analytical Report, 1911, p. 39) reports that 9 samples of resorcinol were found to be of satisfactory quality; 1 was rejected on account of its color.

Wood, Horatio C., Jr., in an article on the possibility of intestinal antiseptis, calls attention to the evident limitations of the use of resorcinol as an intestinal antiseptic.—*Therap. Gaz.* 1911, v. 35, pp. 153-156.

An editorial note (*Critic and Guide*, 1911, v. 14, p. 187) states that 6-grain doses of resorcinol are useful in the treatment of chronic catarrhal gastritis.

RHAMNUS PURSHIANA.

Weck, F. A., states that as early as 1868 he received his first information about cascara sagrada bark as a medicine from an old lady in Eureka, who called it dogwood bark and claimed that it was a splendid physic and good for the liver, but that it griped badly. He says that about 1872 he sent samples of the bark to several eastern manufacturers, but received no encouragement. They either informed him that they had no use for the article or that it was not true cascara sagrada bark. Among the names that were applied to cascara sagrada bark in California he enumerates the following: Dogwood bark, coffee-berry bark, pigeon-berry bark, bear-berry bark, bitter bark, yellow bark, and chittam bark.—*Pacific Pharm.* 1911, v. 5, pp. 55-58.

Lloyd, John Uri, states that *rhamnus purshiana* is distributed over the mountain ranges of the Western Pacific States, being most abundant in California and Oregon. To the settlers of that region it has long been known as chittam wood, an infusion of the bark being used as a cathartic. An eclectic physician, J. H. Bundy, of Colusa, California, was the first to introduce the bark to the medical profes-

sion.—*Eclectic Med. Glean.* 1911, v. 7, pp. 410–412. See also *Bull. Lloyd Libr.* 1911, No. 18, pp. 68–70; and *Pract. Drug.* 1911, v. 29, May, p. 38.

Jones, J. D., reports that comparatively little cascara bark has been peeled during the last four years. The price of the bark is still below the cost of production and does not justify its sale. He states that the bark is only grown in Oregon, Washington, and California, and so far as known there is none in British Columbia.—*Oil, Paint, and Drug Reporter*, 1911, v. 80, Oct. 23, p. 28H.

Miller, Adolph W., reports that it is claimed that the supplies of prime old bark have been practically exhausted and that the price will surely advance in the next two or three years.—*Proc. N. W. D. A.* 1911, p. 84.

Schneider, Albert, states that rhamnus has abundant bast fibers, crystal-bearing fibers, and sclerenchyma cells; also aggregate crystals. The histology of *R. purshiana* and of *R. californica* is closely similar, and the bark of the two trees is mixed by some collectors.—*Merck's Rep.* 1911, v. 20, p. 3.

Rosenthaler, L., calls attention to and describes the crystals obtained from cascara sagrada by pyroanalysis.—*Ber. pharm. Gesellsch.* 1911, v. 21, p. 342.

Hartwich, C., in commenting on the Ph. Germ. V requirements for cascara sagrada, calls renewed attention to the statement that the indigenous frangula has repeatedly been found to be more efficacious than the more expensive cascara.—*Apoth.-Ztg.* 1911, v. 26, p. 6.

Caesar & Loretz (*Jahres-Bericht*, 1911, pp. 21–22) point out that the Ph. Germ. V requires that cascara sagrada yield at least 24 per cent of extract and not more than 6 per cent of ash. No similar requirements are made for frangula.

Southall Bros. & Barclay (*Rep.* 1911, Birmingham, 1912, p. 9) report that 7 parcels of cascara sagrada assayed for cold water soluble matter gave figures ranging from 21.56 to 26.90 per cent, with an average of 24.04.

Allen and Brewis find for extract of cascara sagrada 13.32 per cent of moisture, dried at 100–105°, and 5.54 per cent ash.—*Pharm. J.* 1911, v. 87, p. 172. Also *Chem. & Drug.* 1911, v. 79, p. 214.

An unsigned review of the Ph. Germ. V (*Chem. & Drug.* 1911, v. 78, p. 632) states that fluid extract of cascara sagrada is prepared with a menstruum consisting of alcohol (90 per cent) 3 parts, water 7 parts.

Grazer, Fred, reviews the history of the bitterless fluid extract of cascara sagrada and states that William T. Wenzell, in 1886, was the first to suggest an alkali in the making of a fluid preparation of cascara sagrada, and that he himself published a formula for a bitterless fluid extract of cascara sagrada in 1888.—*Pacific Drug Rev.* 1911, v. 23, June, p. 22.

Cowley, R. C., presents a note on aromatic extract of cascara sagrada.—Chem. & Drug. 1911, v. 79, p. 115. See also pp. 149, 624.

Diefenbach, Adolf, in German Patent No. 240,407, outlines a method for the production of a purified extract from cascara sagrada.—Pharm. Ztg. 1911, v. 56, p. 1010.

Riedner, Heinrich (Med-vet. Klinik, Giessen), presents a dissertation on cascara and its clinical uses. He points out that the oxymethyl-anthraquinone group of derivatives present in this drug is largely eliminated in the urine, to which they impart a characteristic coloration.—Zentralbl. Biochem. u. Biophysik, 1911, v. 11, p. 862.

Burnett, John Albert, states that rhamnus californica is a different drug from cascara sagrada. There has been some confusion in the profession in regard to the value of cascara sagrada in rheumatism; some have reported good results and some reported failure. If rhamnus californica is used, good results will be obtained; if cascara sagrada is used, poor results may be expected.—Phys. Drug News, 1911, v. 6, pp. 90–91.

Jones, Eli G., states that the indications for cascara sagrada are a broad, flabby tongue, headache, and foul breath.—J. Therap. & Diet. 1911, v. 5, p. 138.

RHEUM.

Lloyd, John Uri, states that rhubarb is a gift of the Chinese, who have used it in domestic practice from all times.—Bull. Lloyd Libr. 1911, No. 18, p. 70.

Hosseus, C. C., reports some observations on *Rheum palmatum* Linné as being the origin of the official drug of good quality. He quotes Wilson, who asserts that the rhubarb from the Sungpan regions (*R. palmatum* var. *tanguticum*) is considered by the Chinese to be much superior to the rhubarb from the Tatién-lu regions (*R. officinale*) and it fetches a considerably higher price in the market.—Arch. Pharm. 1911, v. 249, pp. 419–424.

Gehe & Co. (Handelsbericht, 1911, p. 103) comment on the market conditions of Chinese rhubarb, and point out that the incorrect designation, root, was finally changed in the Ph. Germ. V to the more correct rhizome, which, according to the newer researches, is obtained from *R. palmatum* Linné and *R. officinale* Baillon.

Hartwich, C., points out that the Ph. Germ. V now accurately describes rhubarb as a rhizome and defines it as being derived from a species of rheum grown in China and Thibet, probably *R. palmatum*. A reaction for oxymethylanthraquinone has also been included.—Apoth.-Ztg. 1911, v. 26, p. 85.

See also Pharm. J. 1911, v. 86, p. 296.

An editorial (Chem. & Drug. 1911, v. 79, p. 153) calls attention to a discussion in "Notes and Queries" on the etymology of the word "rhubarb" and the history of the drug itself. See also pp. 417, 445.

The Committee of Reference in Pharmacy (Third Report, p. 26) drops *R. palmatum* as a source of rhubarb, and recommends the inclusion of microscopical characters and an ash limit of 12 per cent. See also Pharm. J. 1911, v. 87, p. 709.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 654) points out that an ash limit of 12 per cent is introduced for the powder.

Caesar & Loretz (Jahres-Bericht), 1911, pp. 127-129) discuss the valuation of rhubarb and present a table showing the limitations for ash included in several pharmacopœias.

Rusby, H. H., is of the opinion that we have no sufficient grounds for asserting that the black or blackish, hollow or soft at the center and always more or less decayed rhubarb is of inferior quality to that which is sound from surface to core, and thinks that experimental work is called for.—Pharm. Era, 1911, v. 44, p. 141.

Schneider, Albert, states that rhubarb is often of poor quality, adulterated with small rootlets, peelings and other refuse. It may also be adulterated with flour and curcuma, roots of sorrel and of other related plants.—Merck's Rep. 1911, v. 20, p. 3.

Oesterle and Sypkens report some observations on the history, nature and chemistry of frangula- (rheum-) emodin.—Schweiz. Wehnschr. Chem. u. Pharm. 1911, v. 49, pp. 353-357, 369-378.

Oesterle, O. A., discusses the chemical relations between chrysophanic acid, aloe emodin and rhein.—Arch. Pharm. 1911, v. 249, pp. 445-449.

Tutin and Clewer report a study of the constituents of rhubarb.—J. Chem. Soc. Lond. 1911, v. 99, pp. 946-967. Also Pharm. J. 1911, v. 86, p. 529.

Oesterle, O. A., discusses the chemical constitution of rhein.—Schweiz. Wehnschr. Chem. u. Pharm. 1911, v. 49, pp. 661-665.

Schindelmeiser, J., describes and illustrates a pathological formation in a rhizome of rhubarb.—*Ibid.* pp. 73-75.

Müller, Hugo, reports a study on the occurrence of alizarin in rhubarb, and concludes that alizarin appears to be contained in rhubarb only in small quantities.—J. Chem. Soc. Lond. 1911, v. 99, pp. 967-968. See also Pharm. J. 1911, v. 86, p. 578.

Rosenthaler, L., calls attention to and describes the crystals obtained from rhubarb by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, p. 342. See also pp. 527-529.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that racines of rhapontic are sometimes found in place of racines of rhubarb.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 230, and J. Pharm. Anvers, 1911, v. 67, p. 519.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 18) report that 5 samples of ground rhubarb root proved to yield from

6.94 to 8.2 per cent of ash, average 7.54 per cent. A single batch of powdered English rhubarb gave 6.29 per cent.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for rheum: Water content, from 6.94 to 9.98 per cent; ash content, 9.54 to 13 per cent; alkalinity of water soluble ash, 2.20 to 3.34 per cent; total alkalinity of ash, 6.56 to 15.12 per cent.—*Proc. Ohio. Pharm. Assoc.* 1911, p. 70.

Richter, Ernst, outlines a method for the detection of powdered curcuma in powdered rhubarb by means of the microscope. He recommends the use of liquid petrolatum as the mounting medium in place of glycerin or solution of hydrated chloral.—*Apoth.-Ztg.* 1911, v. 26, p. 921. See also *Chem. & Drug.* 1911, v. 79, p. 782.

Schneider, Albert, reports on 5 samples of rheum, 1 of which was adulterated with foreign tissues.—*Pacific Pharm.* 1911, v. 5, p. 179.

The Committee of Reference in Pharmacy (Third Report, Suppl., p. 2) recommends that extract of rhubarb be made with 45 per cent alcohol. The *Pharmaceutical Journal* (1911, v. 87, p. 554) notes that in the U. S. P. it is 76 per cent, and in the Ph. Germ. 36 per cent.

Allen and Brewis find for extract of rhubarb 13.64 per cent of moisture, dried at 100–105°, and 5.78 per cent ash.—*Pharm. J.* 1911, v. 87, p. 172.

The Biennial Report of the Inspection of Pharmacies, 1909–10, states that the dried extract of rhubarb is sometimes weak, at other times it is an aqueous extract and not officinal.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 238; and *J. Pharm. Anvers*, 1911, v. 67, p. 562.

Xrayser II presents an interesting historical note on rhubarb pills—*Chem. & Drug.* 1911, v. 79, p. 609. Also *Drug Topics* 1911, v. 26, p. 375.

Brunker, J. E., reports that of 56 samples of compound tincture of rhubarb examined the average extractive was 16 gm. in 100 mls; alcohol by volume, 50.27 percent.—*Brit. & Col. Drug.* 1911, v. 60, p. 229.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 4) recommends that the compound tincture of rhubarb be made with 45 per cent alcohol. See also *Pharm. J.* 1911, v. 87, p. 847.

Duncan, C. A., outlines formulas for making sirup of rhubarb and aromatic sirup of rhubarb directly from the drug.—*Proc. Texas Pharm. Assoc.* 1911, p. 105.

Robinson, Beverly, states that rhubarb and soda, or rhubarb and magnesia, either in mist rhei et sodae or in Gregory's powder, are two most useful combinations whenever there are stomachal disorders with fermentation, or hyperacidity.—*Critic and Guide*, 1911, v. 14, p. 337.

Stambach, H. L., advises the use of rheum when a child has sour smell of whole body even after washing or bathing; screaming of

children with urging and sour stools; child impatient, desires many things, cries and dislikes even favorite playthings; after abuse of magnesia if stools are sour.—Hahnemann. Month. 1911, v. 46, p. 475.

RHUS GLABRA.

Lloyd, John Uri, states that the North American Indians used the powdered seeds of sumach to treat piles and as an application to wounds, the juice of the fresh fruit being used as an application to warts and in skin diseases like tetter.—Bull. Lloyd Libr. 1911, No. 18, p. 70.

Schneider, Albert, states that *rhhus glabra* fruit has bright red, large many-celled trichomes, some slender colorless single-celled trichomes, sclerenchyma cells, palisade tissue, endosperm tissue.—Merck's Rep. 1911, v. 20, p. 3.

ROSA GALLICA.

Lloyd, John Uri, states that the rose, in some form of its many varieties, has been in use in medicine as well as in perfumes from the earliest times.—Bull. Lloyd Libr. 1911, No. 18, p. 71.

Hartwich, C., in a review of the Ph. Germ. V, points out that this pharmacopœia requires the petals of *Rosa centifolia* while the Ph. Austr., Ph. Brit. and U. S. P. require *R. gallica* and the Ph. Helv. and Ph. Fr. include both *R. centifolia* and *R. gallica*.—Apoth.-Ztg. 1911, v. 26, p. 13.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Oct. pp. 67-71) report the cultivation of rose trees in France and present illustrations of samples of blooms and of rose bushes called "Roseaie de l'Hay."

An unsigned article (New Idea, 1911, v. 33, pp. 212-213) states that it is now considerably over two hundred years since the culture of roses was started in Bulgaria, and nowhere on earth is the rose found in greater profusion or variety, or possessing such delicate fragrance.

Caspari, Chas., Jr., states that it is difficult to explain the deletion of fluid extract of rose, which is useful in preparing honey and sirup of rose.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 612.

RUBUS.

Lloyd, John Uri, states that the root of the blackberry, and of other varieties of *rubus*, has been in use in domestic medicine from the days of America's first settlement.—Bull. Lloyd Libr. 1911, No. 18, p. 71.

Blanchard, W. H., discusses *rubus* of eastern North America. A careful study of the available material, over a period of nearly 10 years, leads the author to conclude that 8 species include the great bulk of our blackberries, perhaps 90 per cent of them.—Bull. Torrey Bot. Club, 1911, v. 38, pp. 425-439.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for rubus: Water content, 9.36 per cent; ash content, 3.49 per cent; alkalinity of water soluble ash, 0.87 per cent; total alkalinity of ash, 3.67 per cent.—Proc. Ohio Pharm. Assoc. 1911, p. 70.

SABAL.

Lloyd, John Uri, states that the berry of the saw palmetto was practically unknown in medicine before 1879. It appears to have been introduced by Reed and Goss, two southern practitioners.—Bull. Lloyd Libr. 1911, No. 18, p. 71.

SABINA.

Lloyd, John Uri, states that sabina was used in veterinary medicine at least 200 B. C. It was also known to Dioscorides and Pliny.—Bull. Lloyd Libr. 1911, No. 18, p. 72.

Bougault, J., presents a note on the presence of thapsic acid in *Juniperus sabina*.—J. Pharm. et Chim. 1911, v. 3, p. 101.

Gallois calls attention to the stone cells found in the berries of *J. sabina*.—*Ibid.* p. 195.

An unsigned note (J. Am. M. Assoc. 1911, v. 56, p. 1211) on Eighteenth Century materia medica quotes some of the therapy of Herman Boerhaave with reference to savin.

Mamelli and Ganassini present a contribution on the toxicological estimation of savin, with tabulated statement of results.—Répert. pharm. 1911, v. 23, pp. 146–150.

SACCHARUM.

Lloyd, John Uri, states that sugar, made from the cane, has been known from time immemorial and is mentioned by such early writers as Theophrastus, Herodotus, and others.—Bull. Lloyd Libr. 1911, No. 18, p. 72.

Harris, William, states that sugar cane is cultivated at the present day in all the warm regions of the globe. It was first grown in southern Asia, whence it spread into Africa and later into America.—Bull. Dept. Agric. Jamaica, 1909–1911, v. 1, pp. 251–252.

von Wachtel, August, discusses the development of the sugar industry, and points out that of the plants that produce cane sugar two are of primary importance and two of much inferior value, viz, first, sugar cane (*Saccharum officinarum*); second, sugar beet; third, sugar palm (*Phoenix sylvestris*); fourth, sugar maple (*Acer sacchariferum*).—J. Ind. & Eng. Chem. 1911, v. 3, pp. 335–339.

Willett & Gray estimate the 1910–11 season's world crop of cane sugar at 8,445,178 tons.—Cons. & Tr. Rep. June 16, 1911, p. 1189.

The Board of Trade Journal (Sept. 28, 1911) estimates the total production of sugar in the world last year at 15,267,244 tons, as compared with 14,644,526 in 1907. England consumed 1,673,204 tons

of sugar, or 82.43 pounds per person; the United States, 3,285,771 tons, or 79.90 pounds per head; Germany, 1,564,076 tons, or 77.05 pounds per head.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 1176.

Browne, Charles A., discusses the chemistry of raw sugar production, and presents some statistics on the production and use of sugar.—*Chem. Eng.* 1911, v. 13, pp. 179–185.

An unsigned article (*Pacific Drug Rev.* 1911, v. 23, Apr. p. 62) discusses the sugar consumption of the world, and points out that the people of the United States consume half their own weight in sugar every year.

Votoček, Emil, discusses the nomenclature of sugars, and suggests a number of changes.—*Ber. deutsch. chem. Gesellsch.* 1911, v. 44, pp. 360–361.

The Committee of Reference in Pharmacy (Third Report, p. 27) proposes a new monograph for refined sugar, admitting the juice of the sugar beet and other plants. The solution should not develop an unpleasant odor on acidifying with hypophosphorous acid, and barium and strontium are added to the impurities which are to be proved absent; an ash limit of 0.05 per cent is also included. See also *Pharm. J.* 1911, v. 87, p. 710.

An unsigned review of the *Ph. Germ. V* (*Pharm. J.* 1911, v. 86, p. 582) points out that the specific rotatory power is now given as $+66.496^\circ$ in 10 per cent solution 20° . See also *Chem. & Drug.* 1911, v. 78, p. 124.

Schwvers, Frederik, presents some observations on the density of liquid sucrose, and of its solutions in water.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 1478–1486.

Taggart, W. G., reports observations on the occurrence of levan in sugar.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 646–647.

Sutherst, W. F., outlines a rapid volumetric method of sugar estimation with Fehling's solution, the nature of the reaction being determined by noting the color of a drop of the mixture placed on the top side of a filter folded in half; the filtrate passes through, free from copper oxide.—*Ibid.* p. 256.

Jolles, Adolf, discusses a new method for the quantitative estimation of saccharose in the presence of other sugars, by observing the change in polarization due to the decomposition of sugars other than saccharose by alkalis.—*Monatsh. Chem.* 1911, v. 32, pp. 1–7. See also *Pharm. Zentralh.* 1911, v. 52, pp. 1053–1054.

Bardach and Silberstein report observations on the influence of alkali on the colorimetric estimation of sugar according to the method outlined by Jolles.—*Ztschr. Unters. Nahr. u. Genussm.* 1911, v. 21, pp. 540–543.

Bruckner outlines a new method for the quantitative estimation of saccharose in the presence of other varieties of sugar.—*Österr. Chem.-Ztg.* 1911, v. 14, pp. 29–30.

Lemeland, P., outlines a method for the direct polarimetric estimation of saccharose in the presence of reducing sugars.—*Ann. falsif.* 1911, v. 4, pp. 32-34. See also *J. Pharm. et Chim.* 1911, v. 8, p. 195.

Yoder, P. A., outlines a polarimetric method for the estimation of malic acid in cane and maple sugar products.—*Ztschr. Unters. Nahr. u. Genussm.* 1911, v. 22, pp. 329-353.

König, Greifenhagen, and Scholl discuss the estimation of carbohydrates by oxidation, in an alkaline solution, with potassium permanganate.—*Ibid.* pp. 705-723.

Meyer, Julius, presents some observations on the theory of cane sugar inversion.—*Ztschr. physik. Chem.* 1910, v. 72, pp. 117-123.

Cross, William E., presents the referee report on sugar and molasses.—*Proc. Assoc. Off. Agric. Chem.* 1911, 28th Ann. Conv. pp. 202-207. (*Bull. Bur. Chem., U. S. Dept. Agric.*, 1912, No. 152.)

Horne, W. D., discusses temperature correction in raw sugar polarizations, and presents tables showing comparison of the calculated polarization with actual polarization at 20°.—*Ibid.* pp. 207-210.

Bierry, Henri, and Ranc present the results of their investigations on the hydrolysis of saccharose by the ultra-violet rays.—*J. Phys. et Path. gén.* 1911, v. 13, pp. 700-708. Also *Compt. rend. Soc. Biol.* 1911, v. 70, p. 900.

Schmidt, Ch. Ed., in a contribution to the study of the action of *Bacterium coli* and of other intestinal bacteria on the carbohydrates, discusses the fermentation of saccharose.—*Schweiz. Wchnschr. Chem. u. Pharm.* 1911, v. 49, pp. 626-629.

Horne, W. D., in an article on sugar refining, outlines the processes of manufacture.—*Sc. Am. Suppl.* 1911, v. 71, pp. 358-359.

Lehr, L. G., describes a simple method for testing the color of granulated sugar.—*Bull. Pharm.* 1911, v. 25, p. 124.

Notice of Judgment No. 723, under the food and drugs act, deals with the adulteration and misbranding of sugar.

Utech, P. Henry, has found that the use of "Crystal A" confectioner's sugar enables him to prepare sirups entirely free from bluish color. He adds that the water must be distilled and not merely sterilized.—*Bull. Pharm.* 1911, v. 25, p. 369. Also *Drug Topics*, 1911, v. 26, p. 278.

Dorveaux, P., presents an interesting historical note on the use of sugar in pharmacy, apropos of the phrase "Apothicaire sans sucre," which has the same significance as a "cobbler without an awl."—*Bull. sc. pharmacol.* 1911, v. 18, pp. 175-178.

Carter, A. H., reports a case of cardiac failure treated by cane sugar.—*Brit. M. J.* 1911, v. 2, p. 1401.

Le Groff, J., presents a note on glycosuria and saccharosuria in a healthy man, consecutive to the absorption of 100 gm. of saccharose.—*Compt. rend. Acad. sc.* 1911, v. 152, p. 1785.

Goulston, A., contributes a note on the beneficial effect of the ingestion of cane sugar in certain forms of heart disease.—*Brit. M. J.* 1911, v. 1, p. 615. See also Sawyer, James, *Ibid.* p. 753.

Wilenko, G. G., reports observations on the action of intravenous injections of concentrated salt and sugar solutions.—*Arch. exper. Path. u. Pharmacol.* 1911, v. 66, pp. 143–159.

Underhill, Frank P., comments on the contribution by Wilenko.—*Ibid.* pp. 407–408.

Bingel, Adolf, presents some observations on salt and sugar fever and presents tables giving a compilation of cases.—*Ibid.* 1910–11, v. 64, pp. 1–28.

An editorial (*N. York M. J.* 1911, v. 94, p. 591) points out that coincident with the general abandonment of alcoholic beverages or the substitution of moderation for excess in their use, the American public has become devoted to candy and other sweets.

Additional references on the chemistry, pharmacology, and therapeutic uses of sugar will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Exper. Sta. Rec.*; *J. Soc. Chem. Ind.*; *Zentralbl. Biochem. u. Biophysik*; and *Chem. Centralbl.*

SACCHARUM LACTIS.

Hartwich, C., in discussing the Ph. Germ. V, expresses the opinion that the origin of sugar of milk might have been indicated; also points out that a polarization test has been added.—*Apoth.-Ztg.* 1911, v. 26, p. 86.

The Committee of Reference in Pharmacy (Third Report, p. 27) proposes a new monograph for milk sugar. The test for lactic acid is made rather more exact and less stringent, and a test for cane sugar, by extraction with 90 per cent alcohol, is added. See also *Pharm. J.* 1911, v. 87, p. 710.

Baker and Hulton discuss the estimation of sugar of milk in the presence of the ordinarily occurring sugars.—*Ztschr. ang. Chem.* 1911, v. 24, p. 173.

Autenrieth and Funk (*Münch. Med. Wehnschr.* 1911, 1717) discuss the colorimetric determination of sugar of milk in urine and in milk.—*Pharm. Zentralh.* 1911, v. 52, pp. 927–928.

Richmond, H. Droop, discusses the polarimetric estimation of sugar of milk, and points out that acid mercuric nitrate solution does not precipitate all of the laevorotatory proteins of milk. Phosphomolybdic acid will precipitate an additional amount.—*Ztschr. ang. Chem.* 1911, v. 24, p. 173.

Siegfeld, M., reviews the literature for 1910 relating to the chemistry of milk and dairy products.—*Chem. Ztg.* 1911, v. 35, pp. 969–971, 986–987.

Burr and Berberich discuss the examination of sugar of milk and by-products of the manufacture of sugar of milk.—Chem. Ztg. 1911, v. 35, pp. 751-752, 776-777, 794-796, 803-804.

An editorial (Oil, Paint, and Drug Reporter, 1911, v. 80, Oct. 16, p. 7) states that the price paid for casein and sugar of milk from a given quantity of skimmed milk does not compare favorably with the price that is being paid for "milk powder" from the same quantity of milk. This readily explains why dairies are courting the increasing sale of the powder.

Freund, W., reports some observations on the action of ozone on milk and dairy products.—Chem. Ztg. 1911, v. 35, pp. 905-906.

Street, John Phillips, reports on 48 samples of sugar of milk, 4 of which were adulterated or below standard.—Rep. Connecticut Agric. Exper. Sta. for 1910-11, p. 581.

Howard, Charles D., reports on a sample of sugar of milk which was found to be adulterated with 0.84 per cent of mineral matter.—New Hampshire San. Bull. 1911, v. 3, p. 253.

Helmholz, H. F. (Arch. Ped. May), reports his studies on milk sugar, and urges the importance of rational feeding and therapy in the care of infants.—J. Am. M. Assoc. 1911, v. 56, p. 1761.

SAFROLUM.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 61) report on 1 sample of safrol, which had a specific gravity of 1.1031, an optical rotation of 0° , and a refractive index of 1.5379. See also p. 79.

Smith, Kline & French Co. (Analytical Report, 1911, p. 40) reports that 3 samples of safrol were found to be of U. S. P. quality. Specific gravity at 25° was 1.098 to 1.100.

SALTS.

Grosh, Daniel M., discusses the commercial production of granular effervescent salts.—Merck's Rep. 1911, v. 20, p. 281.

Johann, Ernest J., discusses the making of effervescent salts and presents a general formula that may be used for making effervescent magnesium sulphate, sodium sulphate, sodium phosphate, and potassium and sodium tritrate, or mixtures of these.—Proc. Virginia Pharm. Assoc. 1911, pp. 95-98.

Diner, Jacob, thinks that effervescent salts provide a palatable and elegant form of medication.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 342. See also Drug. Circ. 1911, v. 55, p. 293.

SALICINUM.

The Committee of Reference in Pharmacy (Third Report, p. 27) suggests the requirement that salicin be soluble in 1 to 80 parts of 90 per cent alcohol. See also Pharm. J. 1911, v. 87, p. 710.

French, J. M., recommends salicin as a sexual sedative.—J. Therap. & Diet. 1911, v. 5, p. 144.

SALVIA.

Lloyd, John Uri, states that sage has been used by the herbalists from all time.—Bull. Lloyd Libr. 1911, No. 18, p. 73.

Rusby, H. H., states that much of the sage imported consists of the *Salvia triloba* and other very similar species.—Oil, Paint, and Drug Reporter, 1911, v. 80, Nov. 20, p. 28K.

Solereeder, H., discusses, with illustrations, the microscopic analysis of powdered sage.—Arch. Pharm. 1911, v. 249, pp. 123-127.

Schneider, Albert, reports on 9 samples of sage, 1 of which, or 11.1 per cent, was adulterated with bran and curcuma.—Pacific Pharm. 1911, v. 5, p. 177.

SANGUINARIA.

Lloyd, John Uri, states that bloodroot was used by the Indians as a dye for coloring their garments and for staining their faces and bodies, in which direction it fulfilled the double object of a coloring material as well as to keep away insects. Professional use of the drug is due to the Eclectic school of medicine, although its qualities had been well established previously.—Bull. Lloyd Libr. 1911, No. 18, p. 73.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for sanguinaria, water content, 10.57 per cent; ash content, 5.85 per cent; alkalinity of water soluble ash, 1.61 per cent; total alkalinity of ash, 5.35 per cent.—Proc. Ohio Pharm. Assoc. 1911, p. 70.

Dohme and Engelhardt think that an estimation of the total alkaloids in bloodroot might be valuable although such a determination would not indicate the therapeutic value of the drug.—Am. J. Pharm. 1911, v. 83, p. 525.

Vanderkleed, Chas. E., reports on 6 assays of sanguinaria; lowest 3.568 per cent, highest 5.060 per cent alkaloids; all above standard.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

Havenhill, L. D., reports that only 2 of the 7 samples of tincture of sanguinaria examined were reasonably close to the laboratory standard of 2.5 gm. of extractive per 100 cc. The range in extractive found was from 1.17 to 3.49 gm. per 100 cc.—Proc. Kansas Pharm. Assoc. 1911, p. 110.

Smith, Kline & French Co. (Analytical Report, 1911, p. 24) reports that 3 samples of fluid extract of sanguinaria were assayed, containing from 2.465 to 5.4 gm. alkaloids in 100 cc.

The Council on Pharmacy and Chemistry of the A. M. A. reports the omission of sanguinarine nitrate from N. N. R., because it believes that the inclusion of drugs which have not even a presump-

tive value serves no useful purpose.—Rep. Council Pharm. & Chem. 1911, pp. 59–60.

Bernegau, L. H., reports that 3 lots of sanguinarine nitrate assayed from 43.5 to 63.07 per cent of absolute sanguinarine nitrate.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 129.

Stephens, A. F., urges the value of sanguinaria as a stimulant to the mucous membrane. He thinks its true value has not been recognized. The alkaloidal fragments which can be broken out of the plant, namely, sanguinarine, porphyroxine and puccine, do not fulfill all the requirements of the parent.—Eclectic M. J. 1911, v. 71, p. 222.

Felter thinks sanguinaria a much neglected remedy. He does not now as formerly value it for its entire action, but for its quality of impressing the mucous surface of the broncho-pulmonic area and for its stimulating action on the sympathetic and the area supplied by it.—*Ibid.* p. 47.

Woodbury, Benj. C., Jr., reports the use of sanguinaria in cough aggravated by inspiration, talking at night; with flushing of face, loss of taste, even water tasting badly.—Hahnemann. Month. 1911, v. 46, p. 473.

Jones, Eli G., states that our American women suffer from sick headache; he prescribes sanguinaria when the pain begins at the back of the head, rises, spreads over the head and settles down over the right eye with nausea and vomiting.—J. Therap. & Diet. 1911, v. 5, p. 368.

SANTALUM RUBRUM.

Lloyd, John Uri, states that red sandalwood, or red sanders, was used in Europe during the Middle Ages for coloring purposes.—Bull. Lloyd Libr. 1911, No. 18, p. 73.

The Committee of Reference in Pharmacy (Third Report, p. 25) recommends an amplification of the description of red sanders wood. See also Pharm. J. 1911, v. 87, p. 709.

SANTONICA.

Lloyd, John Uri, states that Dioscorides mentioned several species of wormseed and Alexander Trallianus, in the Sixth Century, commended this drug as a remedy for intestinal worms.—Bull. Lloyd Libr. 1911, No. 18, p. 74.

Luftensteiner, Hans, in a contribution on anthelmintics, discusses the nature of santonica and points out that, in addition to resin, fat, and sugar, the flowers contain volatile oil and santonin, which was discovered independently, in 1830, by Kahler and Alms. The volatile oil contains cineol, dipentene, terpineol, and pinene.—Pharm. Prax. 1911, v. 10, p. 145.

An editorial note (Pharm. J. 1911, v. 87, p. 704) states that the average yearly crop of santonica in Turkestan appears to be about 75,000 Russian poods (about 1,000,000 kgs.). Warning is given against a spurious kind of "wormseed" reported as being offered on the different markets which is said to contain no santonin.

Bieber, J. D., states that illicit traders are now endeavoring to sell as wormseed other varieties of *Artemisia*, which strongly resembles the flower heads of the true *Artemisia maritima* as regards appearance, smell, and taste.—Chem. & Drug. 1911, v. 79, p. 623.

Wood, H. C., Jr., calls the attention of the Committee of Revision to Brüning's method (Ztschr. exper. Pharm. u. Therap. 1906, v. 3, pp. 564-587) by determining the vermifugal effect on the intestinal worms obtained from the alimentary tract of dogs and cats.—J. Am. M. Assoc. 1911, v. 56, p. 606.

Hartwich, C., points out that the German title for santonica is now given correctly as flowers to replace the formerly incorrect "seed."—Apoth.-Ztg. 1911, v. 26, p. 7.

Rabak, Frank, describes some new artemisia oils.—Midl. Drug. 1911, v. 45, p. 283.

SANTONIUM.

Düsterbehn, F., in a review of the Ph. Germ. V points out that santonin is described as being only slightly soluble in water.—Apoth.-Ztg. 1911, v. 26, p. 242.

See also Pharm. J. 1911, v. 86, p. 654.

Luftensteiner, Hans, in a contribution on anthelmintics, discusses the chemistry of santonin.—Pharm. Prax. 1911, v. 10, pp. 148-154.

Thomlinson, J. C., contributes a brief note on the estimation of santonin.—Chem. News, 1911, v. 104, p. 257.

Henrard, L., outlines a method for the determination of santonin in chocolate tablets.—Ann. Pharm. Louvain, 1911, v. 17, pp. 1-6.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that santonin was found which was altered by exposure to light.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 235. Also J. Pharm. Anvers, 1911, v. 67, p. 524.

Fearn reports a case of santonin poisoning in an infant.—Eclectic M. J. 1911, v. 71, p. 155.

Mayor, A. (Sem. Méd. 1911, p. 44), comments on the alleged dangers of santonin and outlines certain precautionary measures, among them the avoidance of oils.—J. Pharm. et Chim. 1911, v. 3, p. 359. Also Répert. pharm. 1911, v. 23, p. 215.

An abstract (Bull. Gén. de Thérap. Apr. 23, 1911) calls attention to a recent report of the death of a patient, 3 years old, as a result of santonin poisoning. It is suggested that the absorption of santonin was favored by the administration of castor oil.—Pharm. J. 1911, v. 86, p. 588.

Birney, W. L., finds santonin the sure remedy for retention of urine in new-born infants.—Hahnemann. Month. 1911, v. 46, p. 236.

The Editor of the "Therapeutics" column (J. Am. M. Assoc. 1911, v. 56, p. 815) thinks there is only one legitimate use for santonin, namely, to remove *Ascaris lumbricoides*, or round worm of the intestine. There is no justification for its use in incontinence of urine in children, in epilepsy, nor in some diseases of the retina and optic nerve.

Kopp, Frederick, states that santonin acts very promptly in chronic catarrh of the bladder when given in one-half grain doses three times a day.—Hahnemann. Month. 1911, v. 46, p. 476.

Jones, Eli G., states that santonin is indicated in chronic cystitis when the patient wakes suddenly at night with an urgent desire to urinate, and only a few drops can be voided.—J. Therap. & Diet. 1911, v. 5, p. 367.

Fyfe, John William, states that santonin exerts a stimulating influence upon the great sympathetic, and gives tone to the functions of digestion and nutrition. In the treatment of patients suffering from lumbricoid worms in the alimentary canal it is a much needed remedy.—Eclectic Med. Glean. 1911, v. 7, pp. 426-427.

SAPO.

Riedel's Berichte (1911, pp. 19-21) discusses the Ph. Germ. V requirements for "Sapo medicatus" and reviews the changes that have been made in the several editions of the German Pharmacopœia. It is pointed out that a perfectly neutral soap is not stable, but readily becomes rancid and decolorized.

The Committee of Reference in Pharmacy (Third Report, p. 27) proposes a new monograph for hard soap that contains directions for liberating and purifying the fatty acids, and figures for the iodine value, acid value, melting point, and refractive index of the acids so obtained. See also Pharm. J. 1911, v. 87, p. 710.

Bowersox, Charles H., presents a formula for and discusses the making of "homemade" castile soap.—Drug. Circ. 1911, v. 55, pp. 409-410. See also Western Druggist, 1911, v. 33, p. 449.

Thum, John K., presents a formula for surgeon's grit soap.—Am. J. Pharm. 1911, v. 83, pp. 111-112.

Leimdörfer, J. (Seif.-Ztg.), presents a communication on the colloid chemistry of soaps.—Am. Perf. 1911-12, v. 6, pp. 34, 87, 115, 159.

Budde, Th., outlines a method for the estimation of fatty acids in soaps.—Apoth.-Ztg. 1911, v. 26, p. 167.

See also comments by Thomann.—Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, pp. 238-239.

Fitzpatrick, R. M., contributes a brief note on the estimation of water in soap.—Chem. News, 1911, v. 104, p. 247.

Spurrier, H., describes and illustrates a method to prevent bumping when alcohol is boiled out of an aqueous solution which is covered by a layer of specifically lighter oil, as in soap and oil analysis.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 1632-1633.

Görbing, J. (*Seifenfabr.* 31, 156), presents some observations on the hydrolysis of soaps.—*Chem. Abstr.* 1911, v. 5, p. 1531.

Holdø, D. (*Chem. Rev. Fett- u. Harzindustrie*, 1910, 241), reports some observations on the hydrolytic cleavage of hydroalcoholic solutions of alkali soaps.—*Pharm. Zentralh.* 1911, v. 52, p. 258.

Shukoff and Schestakoff (*Seifensieder-Ztg.* 1911, v. 38, pp. 982-983) discuss the rate of solution of soaps in water.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 1170.

Bowden, Richard Charles, in a report of studies on the constitution of soap in solution, discusses the electrical conductivity of sodium stearate solutions.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 191-195.

Smith, Kline & French Co. (*Analytical Report*, 1911, p. 41) reports that 12 samples of soap were examined. Four were rejected on account of their excessive alkalinity. One sample was found which had evidently been made from cocoanut oil. See also *Proc. Pennsylvania Pharm. Assoc.* 1911, v. 120; and *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 348.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 63) report that the quality of Castile soap examined by them has been good, but that 3 samples were found to contain small traces of sesame oil soap.

Southall Bros. & Barclay (*Rep.* 1911, Birmingham, 1912, p. 39) report that they have again met with soaps offered as *sapo durus* Ph. Brit., which analysis shows to be prepared from fats other than olive oil.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that the medicinal soap does not comply with pharmacopoeial requirements and is only incompletely dissolved in cold alcohol.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 5, p. 235. Also *J. Pharm. Anvers*, 1911, v. 67, p. 524.

Utech, P. Henry, presents a formula for liquid toilet soap.—*Proc. Pennsylvania Pharm. Assoc.* 1911, pp. 221-223. Also *Am. Druggist*, 1911, v. 59, p. 7, and *Drug. Circ.* 1911, v. 55, pp. 629-630.

Rousset, H., contributes a paper on liquid soaps.—*Am. Perf.* 1911-12, v. 6, pp. 288, 304.

Hamilton, H. C., reports some observations on the germicidal and insecticidal values of soaps alone and associated with active agents.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 582-584.

Küttner is reported by the Berlin Correspondent (*J. Am. M. Assoc.* 1911, v. 56, p. 1587) as stating that tincture of soap is not as reliable in its action as was formerly assumed.

SAPO MOLLIS.

Thompson, L. A., discusses the making of soft soap.—Merck's Rep. 1911, v. 20, p. 315. Also Apothecary, 1911, v. 23, Apr. p. 26.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 654) points out that potash soap is required to yield 40 per cent of fatty acids on decomposition.

The Committee of Reference in Pharmacy (Third Report, p. 28) suggests some relaxation of the requirement in regard to the amount of carbonate present in soft soap. The liberated fatty acids should comply with the requirements of the fatty acids of hard soap. See also Pharm. J. 1911, v. 87, p. 710.

Müller, Arthur, outlines a method for the estimation of fatty acids in soft soap.—Apoth.-Ztg. 1911, v. 26, pp. 186-187.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 64) report that 1 sample of soft soap was rejected on account of undue alkalinity, equivalent to 0.1 per cent KOH and 1.3 per cent K_2CO_3 .

E'Ve, Geo. E., reports that 7 samples of green soap failed to produce a pink coloration in the U. S. P. test for "limit of free alkali," but all reacted alkaline to litmus paper. Seven other samples required 0.5, 1.26, 1.3, 1.96, 2.8, 3.0, and 4.1 cc., respectively, of N/10 oxalic acid in this test. Thus only 3 out of 14 samples answered the U. S. P. requirements as to free alkali, but all answered all other U. S. P. tests.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 123.

SARSAPARILLA.

Lloyd, John Uri, states that the qualities of sarsaparilla were made known in early European annals from the commendation of explorers of the New World. It was recommended as a cure for syphilis and acute rheumatism, the Spaniards calling it "an excellent medicine."—Bull. Lloyd Libr. 1911, No. 18, p. 74.

Hartwich, C., points out that the Ph. Germ. V now recognizes but one variety of sarsaparilla, though in Guatemala two varieties are known, the common sarsaparilla and the *Sarsa de corona*, a much larger root.—Apoth.-Ztg. 1911, v. 26, p. 84.

Rusby, H. H., asserts that the provision that the so-called "butts" in the Mexican variety of sarsaparilla shall be removed and rejected is frequently violated; but the rhizomes are frequently ground separately and sold for sarsaparilla. The Pharmacopœia should include a histological description for their detection in the powder.—Pharm. Era, 1911, v. 44, p. 95.

Schneider, Albert, outlines the histology of sarsaparilla.—Merck's Rep. 1911, v. 20, p. 3.

Wiley, H. W., reports sarsaparilla root mixed with a large proportion of rhizome which is the portion the U. S. Pharmacopœia

specifically states should be excluded.—Ann. Rep. U. S. Dept. Agric. 1911, 1912, p. 424.

Langer, Josef, discusses the utilization of substances containing saponin in the production of foods and recommends that because of the possible deleterious action of saponin its use be prohibited.—Österr. Sanitätswesen, 1911, v. 63, pp. 275–280.

An unsigned note (J. Am. M. Assoc. 1911, v. 56, p. 1211) on Eighteenth Century materia medica quotes some of the therapy of Herman Boerhaave with reference to sarsaparilla.

Froggat testified at a coroner's inquest that sarsaparilla is a harmless and useless drug.—Pharm. J. 1911, v. 87, p. 395.

Prinz, Hermann, points out that sarsaparilla, while an excellent vehicle for potassium iodide, has itself no medicinal value.—Dental Cosmos, 1911, v. 53, p. 1375.

SASSAFRAS.

Lloyd, John Uri, states that sassafras was in medicinal use among the natives of Florida long before Ponce de Leon, in 1512, set foot on the soil of this peninsula. Monardes, in 1574, was the first to describe the healing virtues of sassafras.—Bull. Lloyd Libr. 1911, No. 18, pp. 75–78.

Schneider, Albert, states that sassafras bark has large thick walled bast, typical sclerenchyma cells, some compound starch, reddish cell contents, and larger mucilage bearing cells.—Merck's Rep. 1911, v. 20, p. 3.

SCAMMONIUM.

Lloyd, John Uri, states that the dried juice of scammony has been used in domestic medicine from ancient times and was mentioned by Theophrastus, as well as by Dioscorides, Pliny, Celsus, and others.—Bull. Lloyd Libr. 1911, No. 18, p. 78.

The Committee of Reference in Pharmacy (Third Report, p. 29) recommends that scammonium Ph. Brit. be deleted; if retained, the ash limit should be raised to 8 per cent, and the gum resin required to yield to 90 per cent alcohol at least 70 per cent, which should comply with the tests given under scammony resin. See also Pharm. J. 1911, v. 87, p. 710.

Rusby, H. H., states that it has been boldly claimed that practically all the scammony on the market is extracted from the dried root of the false, or Mexican, scammony, and that practically all of the available drug violates the U. S. Pharmacopœia requirements in having been extracted from the dried instead of the living root of scammony. He thinks that the amount coming from Mexican scammony, although large, does not predominate.—Oil, Paint, and Drug Reporter, 1911, v. 80, Nov. 20, p. 28K. See also Pharm. Era, 1911, v. 44, p. 94.

Power and Rogerson present a paper on the chemical examination of *Ipomœa orizabensis* Ledanois, known commercially as Mexican scammony root.—Pharm. J. 1911, v. 87, p. 828.

Parry, Ernest J., quotes Taylor's figures (Am. J. Pharm. 1909, 81, 105) for the acid, ester, and iodine values of scammony. These analyses he considers of the highest value. His own results from 5 samples are in agreement, and the limits for scammony resin should be, acid value, not above 25; ester value, not below 205; iodine value, 10 to 16.—Chem. & Drug. 1911, v. 78, p. 379.

Rosenthaler, L., describes and illustrates the nature of the material obtained from scammony root by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, p. 527.

Guigues, P., contributes a paper on natural scammony, its analysis and adulteration.—Ann. falsif. 1911, v. 4, pp. 91–97. See also Bull. sc. pharmacol. 1911, v. 18, pp. 11–18, 327; Bull. pharm. Sud-Est, 1911, v. 16, pp. 310, 515; and Répert. pharm. 1911, v. 23, pp. 150, 346.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 63) report the examination of 24 samples of virgin scammony, the ether soluble resin content of which ranged from 74.6 to 82.5 percent; Mexican scammony resin was entirely absent.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 18) report that the figures obtained by the analysis of 4 samples of reputedly "virgin" scammony afford interesting reading. They were, ash, 2.14 to 21.30 per cent; soluble in ether (0.717), 38.79 to 78.11 per cent.

SCILLA.

Lloyd, John Uri, states that squill is broadly distributed in the islands of the Mediterranean and is one of the most anciently recorded remedies, being mentioned by Epimenides, a Greek writer of the Seventh Century B. C.—Bull. Lloyd Libr. 1911, No. 18, p. 79.

Merck, E. (Ann. Rep. 1911, Darmstadt, 1912, v. 25, pp. 108–110), gives a brief review of the history of the chemistry and uses of *Scilla maritima*.

Hällström, K. H., describes and illustrates the germination of the seed of *Urginea maritima*.—Schweiz. Wehnschr. Chem. u. Pharm. 1911, v. 49, pp. 89–91.

The Committee of Reference in Pharmacy (Third Report, p. 30) proposes a new monograph for squill, slightly altering the description of the characters, introducing an ash limit of 5 per cent, and recommending that powdered squill be kept dry over quicklime. See also Pharm. J. 1911, v. 87, p. 710.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 653) points out that an ash limit of 5 per cent is introduced.

Wood, H. C., Jr., reports that as there is no satisfactory method of chemical standardization for any of the drugs of the digitalis group

the committee of the Philadelphia Branch of the American Pharmaceutical Association feels that the adoption of a physiologic method of assay for squill would be advisable.—*J. Am. M. Assoc.* 1911, v. 56, p. 606.

Ewins, Arthur James, reports on a new water soluble active constituent of squill and points out that the toxicity of squill is in all probability due to the presence of at least two active principles.—*J. Pharmacol. & Exper. Therap.* 1911–1912, v. 3, pp. 155–160.

The Biennial Report of the Inspection of Pharmacies, 1909–10, calls attention to the neglect in preserving squill in drying bottles according to the directions of the Pharmacopœia.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 231; also *J. Pharm. Anvers*, 1911, v. 67, p. 519.

The Committee of Reference in Pharmacy (Third Report, p. 35) notes that in accordance with the proposal to make vinegar of squill of double the present strength, such vinegar would have to be diluted with an equal volume of water. See also *Pharm. J.* 1911, v. 87, p. 847.

Brunker, J. E., reports that of 138 samples of tincture of squill examined the average extractive was 11.37 gm. in 100 mils; alcohol by volume, 53.65 per cent; seven were defective as to extractive.—*Brit. & Col. Drug.* 1911, v. 60, p. 229.

Diekman, George C., reports the opinion that the present U. S. P. sirup of squill is not a satisfactory preparation and suggests modifying the formula, so as to make the sirup directly from the drugs by percolating with a mixture of glycerin, acetic acid, and water.—*Proc. New York Pharm. Assoc.* 1911, p. 89.

Duncan, C. A., outlines a formula for compound sirup of squill.—*Proc. Texas Pharm. Assoc.* 1911, pp. 105–106.

Dixon, W. E., states that squill possesses many advantages over digitalis as a cardiac tonic, but as usually administered by the mouth a smaller proportion of it is absorbed, and, further, it is somewhat more irritant, so that it has come to be employed almost entirely as an expectorant.—*Pharm. J.* 1911, v. 87, p. 15.

SCOPARIUS.

Lloyd, John Uri, states that scoparius is mentioned in the earliest Italian and German herbals under the name "genesta."—*Bull. Lloyd Libr.* 1911, No. 18, p. 78.

SCOPOLA.

Lloyd, John Uri, states that scopola has an interesting botanical record, reaching back to Matthioli, in the Sixteenth Century. It was known to the early herbalists but was most cautiously employed by them. *Bull. Lloyd Libr.* 1911, No. 18, pp. 79–80. See also *Eclectic M. J.* 1911, v. 71, p. 273.

Schneider, Albert, states that the histology of scopol rhizomes is closely similar to that of belladonna root. Used as an adulterant of belladonna (by substitution).—Merck's Rep. 1911, v. 20, p. 3.

Ferguson, George A., reports on 1 sample of scopol root, containing 0.4592 per cent mydriatic alkaloids.—Proc. New York Pharm. Assoc. 1911, p. 153.

Moore, C. W., states that scopoletin, melting point 204° , which is a constituent of *Scopola japonica*, belladonna, gelsemium, and other drugs, is a monomethyl ether of æsculetin.—Pharm. J. 1911, v. 86, p. 626. Also Chem. & Drug. 1911, v. 78, p. 697.

SCOPOLAMINE HYDROBROMIDUM.

Düsterbehn, F., in a review of the Ph. Germ. V, points out that the melting point of scopolamine hydrobromide is again given as being about 190° for the dried product, though E. Schmidt gives the melting point of the water-free salt as being 193° to 194° .—Apoth.-Ztg. 1911, v. 26, p. 242.

See also Pharm. J. 1911, v. 86, p. 582.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 124) states that when hyoscine hydrobromide is prescribed scopolamine hydrobromide is to be dispensed.

Kickzka, M., reviews the present knowledge of the chemistry and constitution of scopolamine.—Pharm. Prax. 1911, v. 10, p. 205.

Häni, Joh. Rud., reports observations on intensifying the action of narcotics by means of scopolamine.—Therap. Gegenw. 1911, v. 52, pp. 62–68.

Corbett, Dudley, recommends the use of scopolamine-morphine in labor.—Brit. M. J. 1911, v. 1, p. 868.

Rood, Felix, reports on 400 cases of general anæsthesia preceded by scopolamine, which he thinks affords many advantages.—*Ibid.* v. 2, p. 652.

Herb, Isabella C., protests against the routine giving of drugs before anæsthesia. She considers the use of morphine, with atropine or with hyoscine (scopolamine) in combination with ether or chloroform, absolutely detrimental in many instances.—J. Am. M. Assoc. 1911, v. 56, pp. 1312–1315.

Buxton, Rood, Jones, and others report favorable results from the use of scopolamine in various combinations as a preliminary to anæsthesia.—Brit. M. J. 1911, v. 1, p. 757.

Freeland and Solomons present a brief paper on scopolamine-morphine anæsthesia in labor, with their conclusions based upon 100 cases. They note that the patient should be carefully watched.—*Ibid.* pp. 187–188.

An editorial (Therap. Gaz. 1911, v. 35, pp. 630–631), in discussing the use of sedative drugs in surgical anæsthesia, expresses the belief

that the use of morphine and scopolamine for the purpose of producing surgical anæsthesia is now recognized as having an exceedingly limited range of usefulness.

SCUTELLARIA.

Lloyd, John Uri, states that skullcap was in use as a domestic remedy before the publication of the first American materia medica. It was introduced into the practice of medicine by Lawrence Van Derveer, of New Jersey, as a remedy in the cure of hydrophobia.—*Eclectic Med. Glean.* 1911, v. 7, p. 412. Also *Bull. Lloyd Libr.* 1911, No. 18, p. 80.

Henkel, Alice, describes and illustrates skullcap, *Scutellaria lateriflora* L., also gives synonyms, other common names, the habitat and range, and some data on the collection, prices, and uses.—*Bull. Bur. Plant Ind. U. S. Dept. Agric.* 1911, No. 219, p. 22.

Holm, Theo., describes and illustrates the flowering branch, rhizome and rootlets, and the structural characteristics of *Scutellaria lateriflora* L.—*Merck's Rep.* 1911, v. 20, pp. 247-249.

SENEGA.

Lloyd, John Uri, states that senega enjoyed very early a reputation as one of the new remedies produced by America. The Seneca Indians of New York State employed it as a remedy for the bite of the rattlesnake—*Bull. Lloyd Libr.* 1911, No. 18, p. 81.

True, R. H., reports that senega root has offered difficulties in a novel way. It has been found very difficult to transplant senega from the woods or places where it grew naturally into a garden, and, on making a careful study of the soil, it was found that associated with the root of the senega was a fungus, which had formed a feltlike growth about the root tips, and facilitated absorption of food materials from the soil, which materials it passed over to the senega root.—*Proc. N. W. D. A.* 1911, pp. 167-168.

Hartwich, C., points out that the Ph. Germ. V statement that senega has a faint, characteristic odor is not sufficiently descriptive as the odor is well known to be due to salicylmethylate, and this fact might well have been recognized by the Pharmacopœia itself. He also questions the statement that the drug is devoid of starch, as starch has been shown to be occasionally present.—*Apoth.-Ztg.* 1911, v. 26, p. 84.

Nygard, A. (*Farmaceutiskt Notisblad*, 1911, No. 4), differentiates the several commercial varieties of senega.—*Apoth.-Ztg.* 1911, v. 26, pp. 310-311.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for senega: water content, 6.59 per

cent; ash content, 7.09 per cent; alkalinity of water-soluble ash, 0.46 per cent; total alkalinity of ash, 3.46 per cent.—Proc. Ohio Pharm. Assoc. 1911, p. 70.

Schneider, Albert, reports on 2 samples of senega, one of which was adulterated with sand, dirt, wheat middlings, and refuse.—Pacific Pharm. 1911, v. 5, p. 179.

Masuda, Ch., outlines a test for sirup of senega, which on the addition of solution of zinc chloride yields a light yellow coloration.—J. Pharm. Soc. Japan, 1911, Apr., p. 193.

Brunker, J. E., reports that of 112 samples of tincture of senega examined the average extractive was 6.7 gm. in 100 mls; alcohol by volume, 54.85 per cent; 1 was defective as to extractive and 1 as to alcohol.—Brit. & Col. Drug. 1911, v. 60, p. 229.

SENNA.

Lloyd, John Uri, states that senna was introduced into Western Europe by the Arabians and was probably introduced into Egypt from Mecca. In early Arabian medicine the pods of the senna were preferred to the leaves.—Bull. Lloyd Libr. 1911, No. 18, p. 81.

Gehe & Co. (Handelsbericht, 1911, p. 76-77) point out that, because of the failure of the crop, the price for Tinnevely senna leaves has been high. Alexandria senna is also unusually scarce.

An editorial (Pacific Pharm. 1911, v. 5, p. 223) states that ideal conditions for the growing of senna exist in the Coachella Valley in California.

Rusby, H. H., states that the sale of broken senna as "senna U. S. P." has been very properly authorized by the Government, but that of senna siftings, containing large amounts of sand and other foreign matter, has caused great trouble.—Oil, Paint, and Drug Reporter, 1911, v. 80, Nov. 20, p. 28K. See also Proc. New York Pharm. Assoc. 1911, p. 288, and Midl. Drug. 1911, v. 45, p. 343.

Schneider, Albert, outlines the histology of senna and states that it is adulterated with pods, stems, refuse, sand, and pebbles; also with foreign leaves and leaflets.—Merck's Rep. 1911, v. 20, p. 3.

Linke, H., points out that the Ph. Germ. V permits 12 per cent of ash in the official senna. One sample examined by him yielded 12.4 per cent.—Ber. pharm. Gesellsch. 1911, v. 21, p. 189.

Also Pharm. J. 1911, v. 86, p. 653.

Hartwich, C., in a review of the Ph. Germ. V, regrets that a test for oxymethylantraquinone has not been added in connection with senna.—Apoth.-Ztg. 1911, v. 26, p. 14.

The Committee of Reference in Pharmacy (Third Report, p. 30) suggests the addition of a description of the principal microscopical characters of Alexandria senna. See also Pharm. J. 1911 v. 87, p. 710.

Rosenthaler, L., describes and illustrates the nature of the material obtained from senna leaves by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 526-527.

Mitlacher, Wilhelm, reports on the adulteration of senna by the leaves of *Ailanthus glandulosa* Desf.—Ztschr. allg. österr. Apoth.-Ver. 1911, v. 49, pp. 149-151.

Schneider, Albert, reports on 2 samples of senna, 1 of which was adulterated with sand and blackened leaves.—Pacific Pharm. 1911, v. 5, p. 179.

Jaffa, M. E., reports 2 samples of "Powd. Alex. Senna" consisting largely of sand and foreign vegetable tissue.—Bull. California Bd. Health, 1911, v. 7, p. 163.

Howard, Charles D., reports that 11 samples of powdered senna leaf were found to range from 11.12 per cent to 15.62 per cent of ash, while a sample of the genuine unbroken leaf contained but 9.34 per cent.—New Hampshire San. Bull. 1911, v. 3, No. 13, p. 254.

Notices of Judgment Nos. 871, 1009, and 1010, under the food and drugs act, deal with the adulteration and misbranding of senna.

See also comments by "G. B. K." Midl. Drug. 1911, v. 45, p. 432.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that senna is found with black follicules which should lead to its rejection.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 231, and J. Pharm. Anvers, 1911, v. 67, p. 519.

Grazer, Fred, outlines a method for making compound infusion of senna and suggests that in the administration of blackdraught a small quantity of plain aerated water be given to counteract the disagreeable taste of the mixture.—Pacific Drug Rev. 1911, v. 23, Feb., p. 13.

Plenderleith, J. W., presents a paper on crystalline deposits in infusion of senna.—Pharm. J. 1911, v. 87, p. 884; Chem. & Drug. 1911, v. 79, p. 955; and Brit. & Col. Drug. 1911, v. 60, p. 530.

Dawson, E. S., suggests that some limit, either by weight or volume, be placed on the alcoholic percolate in making the fluid extract of senna so that the operator may be satisfied that he has removed from the drug the griping principle.—Proc. New York Pharm. Assoc. 1911, p. 92.

An unsigned note (J. Am. M. Assoc. 1911, v. 56, p. 1211) on Eighteenth Century materia medica quotes some of the therapy of Herman Boerhaave with reference to senna.

SERUM ANTIDIPHTHERICUM.

Vanderkleed, C. E., discusses with illustrations the methods employed in the making of diphtheria antitoxin.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 257.

Lackenbach, Fred I., discusses the making of antidiphtheric globulins and of dried antitoxin globulins.—*Pacific Drug Rev.* 1911, v. 23, Feb. p. 12.

An unsigned article (*New Idea*, 1911, v. 33, p. 91) outlines methods of preparing high potency antitoxin and describes the process introduced by Gibson and Banzhaf's modification.

Pearson, W. A., points out that considerable improvement has been made in diphtheria antitoxin since its introduction. Its potency has been considerably increased and its preparation made consistent with the highest type of bacteriologic, physiologic and chemic manipulation.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 238. Also *Am. Druggist*, 1911, v. 58, p. 379.

The *Annales de Pharmacie* (Louvain, 1911, v. 17, pp. 56-60) reproduces the Belgian regulations with reference to antidiphtheric serum.

An editorial (*Chem. & Drug.* 1911, v. 78, p. 85) states that it is now beginning to be recognized in official circles that the time has come for the adoption of a unit standard for diphtheria antitoxin, since England is lagging far behind Germany and the United States of America in this important matter, both of these countries having legal standards.

Xrayser II comments on the difficulty in establishing a standard for diphtheria antitoxin, and urges the General Medical Council to hasten slowly.—*Ibid.* v. 78, p. 127.

Goodall, E. W., discusses some points connected with the serum treatment of diphtheria.—*Brit. M. J.* 1911, v. 1, pp. 292-296. See also pp. 467, 726.

An editorial (*J. Am. M. Assoc.* 1911, v. 56, p. 1725) urges the importance of great care and discrimination in the prophylactic administration of diphtheria antitoxin, calling attention to the recent paper by E. W. Goodall.

Williams, Mary Hamilton, apropos of Goodall's communication reports anaphylactic symptoms in a patient after administration of a second injection of diphtheria antitoxin.—*Brit. M. J.* 1911, v. 1, p. 495.

Richards, J. T., doubts the advisability of a free supply of diphtheria antitoxin and makes further comments on Goodall's communication.—*Ibid.* p. 467. See also Donald, p. 494; Hardwicke, George, pp. 494, 598, 658.

McKeen, Sylvester F., reports a sudden death following a prophylactic dose of diphtheria antitoxin. Necropsy revealed status lymphaticus.—*Boston M. & S. J.* 1911, v. 164, p. 503.

An editorial (*Lancet*, 1911, v. 180, p. 1654) discusses sudden death following a prophylactic injection of diphtheria antitoxin with special reference to the reports of Gilette, Goodall, McKeen, and others.

Addison is reported to have given results in some 8,000 cases of diphtheria as follows:

Day of disease on which antitoxin was given.	Number of cases.	Mortality.
		Per cent.
First.....	2, 126	6.6
Second.....	1, 441	6.3
Third.....	1, 600	11.12
Fourth.....	1, 276	17.34
Fifth or later.....	1, 645	14.77

—Brit. M. J. 1911, v. 1, p. 715.

The Massachusetts State Board of Health (Rep. 1911, p. 485) reports on the distribution of diphtheria antitoxin, and gives a tabulated summary for the 16 years and 8 months ended November 30, 1911; for the year ending March 31, 1896, 1,724 bottles were distributed; for the year ending November 30, 1911, 96,522 bottles.

Risel, Hans, presents a table showing the results of serum treatment of diphtheria according to various authorities.—Therap. Monatsh. 1911, v. 25, p. 31.

Greene, Helen M., reports that she and her partner have been giving antitoxin by the mouth, exclusively, for two years and in that time have lost only 2 cases. Improvement sets in within six hours and the child suffers no shock.—Brit. M. J. 1911, v. 1, p. 993.

Cumberlege, G. I., reports 2 cases in which he administered diphtheric antitoxin by the mouth and urges that the method be given further trial.—*Ibid.* v. 2, p. 108. See also pp. 163, 1106.

Levis, J. M. Sterling, reports results differing from the above and thinks that surer results are obtained by the hypodermic method.—*Ibid.* v. 2, p. 1235.

Hodgson, A. E., contributes a note on the administration of thyroid gland substance upon serum rash and serum sickness in diphtheria.—Lancet, 1911, v. 180, p. 373.

Keith, John R., reports 3 cases of serum sickness occurring in diphtheria in which he had better results from sodium salicylate and acetosalicylic acid than from calcium lactate.—Brit. M. J. 1911, v. 2, p. 105.

Roddy, John A., reports a study of diphtheria antitoxin and anaphylaxis, in which he points out that the first injection of horse serum into man is innocuous; anaphylaxis is rarely manifest after a subsequent injection, and when it occurs, complete recovery usually follows. The danger of anaphylaxis is insignificant in comparison with the danger of diphtheria.—N. York M. J. 1911, v. 94, pp. 1227-1229.

Seibert, Wm. A., states that of the two methods of treating diphtheria, the crude one of applying antitoxin with its train of ill effects, and the true homœopathic method of taking the potentized diphtherinum by the mouth, the latter appeals most to him.—Hahnemann. Month. 1911, v. 46, p. 883.

Fleagle, M. M., believes that antitoxin is a Godsend, but he does not believe in the enormous dosage advocated and used by many physicians.—*Ibid.* pp. 926–935.

Jones, Eli G., learns in the Registrar-General's office in England that the deaths from diphtheria have increased 40 per cent within the last 14 years, since antitoxin is used. Before he would be guilty of injecting the filthy horse serum into the body of an innocent child to poison the blood for a few paltry dollars he would go out of the practice of medicine and leave it for men who want to do that kind of business. The mortality with his medication is about 1 per cent.—*J. Therap. & Diet.* 1911, v. 5, p. 169.

A number of references on the use of antidiphtheric serum and the possible deterioration of potency of this agent under varying conditions will be found in *Hyg. Rundschau*. See also *Index Med.*; *J. Am. M. Assoc.*; and *Chem. Abstr.*

SERUM ANTITETANICUM.

The *Annales de Pharmacie* (Louvain, 1911, v. 17, pp. 103–105) reproduces the Belgian regulations with reference to antitetanic serum.

Pearson, W. A., asserts that the curative limitations of tetanus antitoxin will probably never be overcome.—*Am. Druggist*, 1911, v. 58, p. 379. Also *Proc. Pennsylvania Pharm. Assoc.* 1911, p. 238.

Baroni, V., discusses, with illustrations, the filterability of tetanus toxin through membranes, colloidal and viscous.—*Compt. rend. Soc. Biol.* 1911, v. 70, p. 312.

Camus, Jean, reports the results obtained in the treatment of experimental tetanus by subcutaneous, intravenous, bulbar and parabolbar injections of antitetanic serum.—*Ibid.* pp. 633, 689.

Henry, J. Norman, in a report on the treatment of tetanus, states that the treatment by means of antitetanic serum has never come up to expectations excited by its usefulness in animal experimentation, particularly in its immunizing effect.—*Med. Rec.* 1911, v. 80, p. 721.

Kennedy, J. C., questions whether antitetanic serum is a factor in the cure of tetanus, and thinks its value still undetermined.—*N. York M. J.* 1911, v. 93, p. 830.

Holman, Carl J., thinks it would be wise in all cases of injuries to use prophylactic doses of antitetanic serum.—*Merck's Arch.* 1911, v. 13, p. 180.

Everling reports two cases of tetanus treated with antitoxin.—*Therap. Gegenw.* 1911, v. 52, pp. 109–111.

Liell, Edward N., reports the successful use of tetanus antitoxin, despite decided symptoms of lockjaw being manifested for three days antedating its use; fifty-five thousand units of antitoxin were given in all.—J. Am. M. Assoc. 1911, v. 57, p. 15.

Loewe, Siegfried, reports observations on the fixation of tetanus toxin.—Biochem. Ztschr. 1911, v. 33, pp. 225–246, 495–511.

Eve, Henry B. (Vet. News), reports the successful treatment, of a horse suffering from traumatic tetanus, with antitetanic serum.—Am. Vet. Rev. 1911, v. 39, p. 676.

Risel, Hans, presents a table showing the results of serum treatment of tetanus according to Kentzler.—Therap. Monatsh. 1911, v. 25, p. 26.

A number of references on the theory and use of antitetanic serum will be found in Hyg. Rundschau. See also Index Med.; J. Am. M. Assoc.; and Chem. Abstr.

SERUMS AND VACCINES.

Vanderkleed, C. E., discusses the production of vaccines and sera, and presents a number of illustrations of the different steps of the processes employed.—Proc. Pennsylvania Pharm. Assoc. 1911, pp. 250–270.

Pearson, W. A., in discussing the future of biologic products and their relation to pharmacy, points out that sera and vaccines must be kept under suitable conditions so as to preserve their efficiency.—*Ibid.* p. 240. Also Am. Druggist, 1911, v. 58, p. 380.

Twining, C. M., discusses the sale of veterinary vaccines and serums by the pharmacist. He also comments on the nature of some of these products.—Pacific Pharm. 1911, v. 5, pp. 195–201.

Stewart, F. E., outlines a method of making and standardizing serums and vaccines.—Pacific Pharm. 1911, v. 5, pp. 228–233.

Merck, E., in German patent 233,693, outlines a method for the preparation of non-decomposable sera. The dried, subsequently powdered, serum is suspended in olive oil.—Chem. Repert. 1911, v. 35, p. 242.

Goldie, Wm. B., describes several types of serum reactions and reports a number of cases.—New Idea, 1911, v. 33, pp. 195–198.

Egbert, J. Hobart, discusses sera and vaccines, prophylactic and curative.—N. York M. J. 1911, v. 94, pp. 970–973.

Müller, Curt A., discusses the action of antigens and of antibodies *in vitro*.—Pharm. Ztg. 1911, v. 56, p. 555.

Park, William H., in a discussion on the advantages of single over multiple doses of antitoxin and of intravenous over subcutaneous or intramuscular injections, states that the slow absorption of the antitoxin from the tissues would seem to make the single injections by far the better method.—J. Pharmacol. & Exper. Therap. 1911–1912, v. 3, p. 474.

Risel, Hans, discusses the therapeutic value of curative sera and presents a number of statistics in the form of tables.—*Therap. Monatsh.* 1911, v. 25, pp. 20–32.

Lüders, Richard, reviews the progress made in our knowledge of sera and antitoxins during the year 1910.—*Chem. Ind.* 1911, v. 34, pp. 186–188, 212.

Thompson, W. Gilman, states that while some of these preparations are now universally admitted to outrank all older therapeutic measures in potency and reliability, others are as yet in a purely experimental stage. He reviews experiences in the New York hospitals with various products.—*J. Am. M. Assoc.* 1911, v. 56, p. 1852.

Horder, T. J., discusses the scope of immune and normal serum in treatment.—*Brit. M. J.* 1911, v. 2, pp. 667–669; see also p. 285.

Thorne, R. Thorne, contributes a brief note on antilytic serum in the treatment of chronic gastric and duodenal ulceration.—*Ibid.* v. 1, p. 1111.

Tyrode, Maurice Vejux, reviews the recent applications of the serotherapy of gastric and duodenal ulcers.—*Boston M. & S. J.* 1911, v. 164, p. 685.

Taylor, Alonzo Englebert, presents a brief note on the treatment of exophthalmic goitre with specific antiserum. Reporting negative results, he found that within a year after the serum was prepared the specific reaction could no longer be elicited. Evidently the precipitating protein is denatured on standing, probably through a reaction of hydrolysis.—*J. Am. M. Assoc.* 1911, v. 56, p. 263.

v. Pirquet, C. E., presents a comprehensive study on allergy, with an extensive bibliography.—*Arch. Int. Med.* 1911, v. 7, pp. 255–288, 383–436.

A list of the licensed dealers in serums is reprinted.—*Am. Druggist*, 1911, v. 59, p. 129.

Additional references on sera and the standardization of sera will be found in *Hyg. Rundschau*. See also *Compt. rend. soc. Biol.*; *Index Med.*; *J. Am. M. Assoc.*; and *Chem. Abstr.*

ANAPHYLAXIS.

Hirshberg, Leonard K., presents a concise review of researches in prophylactic and anaphylactic medicine.—*Am. J. M. Sc.* 1911, v. 141, pp. 659–666.

An editorial (*N. York M. J.* 1911, v. 93, p. 738) calls attention to the studies of Auer and Lewis, and of Schultz and Jordan, and concludes with the statement that practically all the evidence concerning the relation of anaphylaxis to serum therapy shows that a repetition of serum injections in the human subject should not be feared.

An editorial (*Therap. Gaz.* 1911, v. 35, p. 266) discusses the treatment of anaphylaxis, and suggests the use of digitalis to overcome the fall of blood pressure usually evidenced.

An editorial (J. Am. M. Assoc. 1911, v. 56, p. 746) on infection and anaphylaxis calls attention to the work of Rosenau and Anderson, v. Pirquet and Schick, Neufeld and Dold, and others.

Koch reviews some of the earlier German contributions to our knowledge of anaphylaxis.—*Apoth.-Ztg.* 1911, v. 26, pp. 7-8.

Schultz, W. H., reports some observations on the reaction of the cat toward horse serum.—*J. Pharmacol. & Exper. Therap.* 1911-1912, v. 3, pp. 299-317.

Zinsser and Johnson make a contribution on heat-sensitive anticomplementary bodies in human blood serum.—*J. Exper. M.* 1911, v. 13, pp. 31-42.

Zinsser, Hans, discusses the toxic action of certain normal sera and its relation to anaphylaxis.—*Ibid.* v. 14, pp. 25-43.

Pearce, Karsner and Eisenbrey present a series of studies in immunity and anaphylaxis, with special reference to the proteins of the kidney and liver. Their results do not support the view put forward that nucleoproteins play an important part in the course of production of cytotoxic immune sera.—*Ibid.* v. 14, pp. 44-58.

Noguchi and Bronfenbrenner discuss variations in the complement activity and fixability of Guinea pig serum.—*Ibid.* v. 13, pp. 69-77.

Auer, J., presents a fourth communication on lethal cardiac anaphylaxis in the rabbit.—*Ibid.* v. 14, pp. 476-496.

Barach, Joseph H., remarks that while his experimental investigations, on the relation between asthma and anaphylaxis, were negative, there is a promising field for research along these lines.—*N. York M. J.* 1911, v. 93, p. 117.

Moschcowitz, Eli, presents a suggestive paper on the relation of eosinophilia and anaphylaxis.—*Ibid.* pp. 15-19.

Lesné and Dreyfus discuss the reality of anaphylaxis by way of the intestinal tract and the rôle of hydrochloric acid, gastric juice, and pancreatic juice.—*J. Pharm. et Chim.* 1911, v. 3, p. 367. See also *Compt. rend. Soc. Biol.* 1911, v. 70, p. 136, v. 71, p. 153.

Karsner and Nutt discuss the relation of the intoxicating dose of horse serum to the protective dose of atropine in anaphylaxis in the Guinea pig.—*J. Am. M. Assoc.* 1911, v. 57, pp. 1023-1025.

Richet, Charles, presents a brief note on alimentary anaphylaxis, using the term alimentary in the broadest sense, apropos of the work of Rosenau and Anderson.—*Compt. rend. Soc. Biol.* 1911, v. 70, p. 44.

Minet and Leclercq outline a new method of avoiding anaphylactic accidents.—*J. Pharm. et Chim.* 1911, v. 3, p. 470.

Bruyant, L., presents a note on the relation between anaphylaxis and the tuberculin reaction.—*Compt. rend. Soc. Biol.* 1911, v. 70, p. 782.

Keith, John R., reports 3 cases of serum sickness occurring in diphtheria in which he had better results from sodium salicylate and

aceto-salicylic acid than from calcium lactate.—Brit. M. J. 1911, v. 2, p. 105.

Additional references on anaphylaxis will be found in Index Med.; J. Am. M. Assoc.; Compt. rend. Soc. Biol.; Zentralbl. Biochem. u. Biophysik; and Hyg. Rundschau.

IMMUNITY.

Bass, C. C., outlines a new conception of immunity and its application to the cultivation of protozoa and bacteria from the blood, and to therapeutic measures.—J. Am. M. Assoc. 1911, v. 57, p. 1534.

Bond, C. J., presents his observations on the nature of the immunity reaction.—Brit. M. J. 1911, v. 1, pp. 1157-1164.

Gay, Frederick P., asserts that in view of the present and potential value of applied immunology in the diagnosis, the prevention, and the cure of human and animal disease, skilled animal experimentation necessitates the encouragement of every humanitarian.—J. Am. M. Assoc. 1911, v. 56, pp. 578-583.

Lamar, Richard V., presents certain chemo-immunological studies on localized infections, with special reference to the pneumococcus.—J. Exper. M. 1911, v. 13, pp. 1-23, 380-386.

He presents in a third paper some further observations upon the action of certain soaps on the pneumococcus and its experimental infections.—*Ibid.* v. 14, pp. 256-264.

Webb and Williams, reporting on the production of tuberculosis by the inoculation of increasing numbers of bacilli, conclude that it may be safely considered that a guinea pig has received, without the production of tuberculosis, about one thousand times a lethal quantity of living virulent tubercle bacilli.—J. M. Research, 1911, v. 24, pp. 1-4.

They also contribute a study on immunity to tuberculosis and its production in monkeys and children.—J. Am. M. Assoc. 1911, v. 57, pp. 1431-1434.

Courmont and Rochaix report on vaccination against pyocyaneous infection by the intestinal route.—Compt. rend. Acad. Sc. 1911, v. 153, p. 131.

They also report attempts at antitubercular immunization by way of the intestine.—*Ibid.* v. 153, p. 397. See also p. 1087.

Duval and Gurd discuss experimental immunity with reference to the bacillus of leprosy; a study of the factors determining infection in animals.—J. Exper. M. 1911, v. 14, pp. 181-195.

Gildersleeve, Nathaniel, presents his studies on pyocyaneous immunity, with special reference to the therapeutic value of vaccines.—J. Am. M. Assoc. 1911, v. 57, pp. 286-290.

Cowie, David Murray, contributes a brief paper on hirudin and hirudin immunity.—J. M. Research, 1911, v. 24, pp. 497-512.

Lambert, R. A., presents a note on the cultivation in vitro of rat sarcoma; a study in immunity.—*J. Am. M. Assoc.* 1911, v. 56, p. 587.

Arrhenius, Svante, discusses the applications of physical chemistry to the doctrine of immunity, antigens and antibodies.—*Chem. News*, 1911, v. 104, pp. 25-28, 39-41, 55-58.

Luckhardt and Becht conclude that the spleen fixes antigen, and that it is concerned directly or indirectly in the immune bodies.—*Am. J. Physiol.* 1911, v. 28, pp. 257-274.

Additional references on the nature and production of immunity will be found in *Index Med.*; *J. Am. M. Assoc.*; *Zentralbl. Biochem. u. Biophysik*; and *Hyg. Rundschau*.

OPSONIC INDEX.

Kronberger, Hans, reports some observations on the opsonin reaction, outlines the methods employed, and describes with illustrations the results observed.—*Ztschr. exper. Path. u. Therap.* 1911, v. 9, pp. 87-96.

Crane, A. W., presents a paper on vaccine therapy and a simplified opsonic index, with several illustrations of the apparatus used.—*Am. J. M. Sc.* 1911, v. 141, pp. 724-741.

Synnott, Martin J., reviews the present status of inoculation therapy and discusses the application of opsonins and vaccines in the treatment of bacterial infections, as taught by Wright.—*Med. Rec.* 1911, v. 79, pp. 985-996.

Breskman and Tint contribute a brief note on opsonins in pleurisy.—*J. M. Research*, 1911, v. 24, pp. 531-535.

Gruber, John T., reports "Some Practice of the Opsonic." He asserts that vaccine therapy should be encouraged and that the autogenic is the more reliable product.—*Am. Vet. Rev.* 1911, v. 39, p. 57.

A number of additional references on the nature of antibodies will be found in *Index Med.*; *J. Am. M. Assoc.*; *Zentralbl. Biochem. u. Biophysik*; and *Hyg. Rundschau*.

VACCINE THERAPY.

An editorial (*Fol. Therap.* 1911, v. 5, pp. 79-82) discusses the present position of vaccine therapy, and points out that ten years have elapsed since the system of treatment by the inoculation of vaccines has been introduced to the profession.

Stoner, H. W., contributes a résumé of vaccine therapy with an extensive bibliography.—*Am. J. M. Sc.* 1911, v. 141, pp. 186-213.

Vanderkleed, C. E., discusses the production of vaccines and sera and presents a number of illustrations of the different steps of the processes employed.—*Proc. Pennsylvania Pharm. Assoc.* 1911, pp. 250-270.

Stewart, Ian Struthers, discusses vaccines, their preparation and administration.—*Drug Topics*, 1911, v. 26, pp. 19–22, 36–39.

Medalia, Leon S., has used with success, in standardizing vaccines, his simplified method of staining bacteria.—*J. Am. M. Assoc.* 1911, v. 56, pp. 1189–1190, 1345.

Synnott, Martin J., discusses the practical application of bacterial vaccines, their application in a variety of infections, dosage, and the relative value of stock vaccines and of autogenous vaccines.—*Med. Rec.* 1911, v. 80, pp. 759–766.

Nagle, E. W., presents some observations on vaccine therapy.—*Boston M. & S. J.* 1911, v. 165, pp. 377–378.

Plummer, H. E., calls attention to some of the possible causes of failure following the use of bacterial vaccines and antisera.—*Med. Rec.* 1911, v. 79, pp. 1051–1052.

Robinson, Beverley, states that the modern use of vaccines, in different directions, is now hopeful, but they must still be employed with great good judgment and discrimination, so as not to be soon and unduly discredited.—*Critic and Guide*, 1911, v. 14, p. 339.

Craig, Henry A., discusses the principles and application of autogenous bacterial vaccines in the treatment of diseases.—*Med. Rec.* 1911, v. 80, pp. 1015–1021.

Graham, Edwin E., reports some observations on the value of pertussis vaccine in the treatment of whooping cough.—*Ibid.* p. 402.

Graham, Edwin E., believes that the dose of pertussis vaccine should be increased beyond 40,000,000, especially in severe cases.—*J. Am. M. Assoc.* 1911, v. 57, p. 151.

Ball, C. Preston, contributes a note on the treatment of rheumatic diseases by vaccines, with a report of 5 cases.—*Brit. M. J.* 1911, v. 1, p. 1105.

Wolverton, W. C., discusses the basis of vaccine therapy in acute rheumatic polyarthritis.—*Med. Rec.* 1911, v. 80, pp. 868–870.

Bannatyne and Lindsay present a brief note on the treatment of rheumatoid arthritis by vaccines, with report of 2 cases.—*Brit. M. J.* 1911, v. 1, p. 192.

McDonald, C. L., reports the successful treatment by vaccine therapy of a carbuncle in a diabetic.—*J. Am. M. Assoc.* 1911, v. 57, p. 23.

He also reports results in the treatment of thirty cases of otitis media by vaccine therapy.—*Ibid.* v. 56, p. 1647.

Williams, William R., discusses the vaccine treatment of pyorrhœa alveolaris, with a report of 8 cases.—*Am. J. M. Sc.* 1911, v. 141, pp. 666–672.

Beeman, T. W., reports a case of chronic blood infection successfully treated with *Staphylococcus aureus* vaccine.—*Med. Rec.* 1911, v. 80, p. 269.

Green, Robert M., reports observations on the use of Coley toxins in the treatment of sarcoma.—*Boston M. & S. J.* 1911, v. 165, pp. 1-9.

Polak, John Osborn, reviews his two years' experience with vaccines in pelvic infections.—*J. Am. M. Assoc.* 1911, v. 57, pp. 1738-1740.

Freeman, J., reports further observations on the treatment of hay fever by hypodermic inoculations of pollen vaccine, with a tabulated statement of results.—*Lancet*, 1911, v. 181, pp. 814-817.

Schafer, A. F., discusses a modified vaccine therapy based upon the theory of multiple infections and quantitative reaction.—*Therap. Gaz.* 1911, v. 35, pp. 257-264.

Ladd, Louis W., condemns the indiscriminate use of vaccines by those ignorant of their power for good and evil, as there are no more powerful poisons than bacterial proteids, and much harm may result from their injudicious use.—*J. Am. M. Assoc.* 1911, v. 56, p. 1749.

Ritchie, James, discusses the difficulty of judging the effects of vaccination. He thinks that vaccine therapy has suffered more than any other recently introduced therapeutic method, from the indiscriminate use of the weapons by those who have taken no trouble to acquire a knowledge of their characters.—*Brit. M. J.* 1911, v. 2, p. 1594.

An editorial (*Therap. Gaz.* 1911, v. 35, pp. 800-801) calls attention to a paper by Alderson on "Some don'ts in vaccine therapy."

Moore, A. M., discusses autogenous vaccines as applying to the law of homœopathy. He is of the opinion that a cure for the malignant growths will be worked out through autogenous vaccines.—*Hahne-mann. Month.* 1911, v. 46, pp. 815-820.

Lee, Elmer, states that if impelled to try vaccines, so much in fashion at present, don't! Try instead the homœopathic nosode corresponding. If there happens to be none in a given case, have that "coccus" (or whatever else it be) triturated and "run up" to the potency you desire. Better and safer results will follow.—*Ibid.* p. 78.

Twining, C. M., discusses the sale of veterinary vaccines and serums by the pharmacist. He also comments on the nature of some of these products.—*Pacific Pharm.* 1911, v. 5, pp. 195-201.

See also under the several disease headings.

ARTIFICIAL SERUM.

A table showing the constituents of artificial serums recommended by different authors is reprinted.—*Drug. Circ.* 1911, v. 55, p. 695.

Beringer, George M., points out that, in the Ph. Germ. V, physiological salt solution is given as sodium chloride 8, sodium carbonate 0.15, water 991.85 parts, filtered and sterilized.—*Proc. New Jersey Pharm. Assoc.* 1911, p. 81. Also *Am. J. Pharm.* 1911, v. 83, p. 334.

Cannaday (*J. Am. M. Assoc.* Apr. 15, 1911) outlines a simple drop method of giving rectal enemas of normal saline solution.—*Therap. Gaz.* 1911, v. 35, pp. 584-585.

See also under *Sodii chloridum*.

ANTHRAX.

Fergusson, W. Manson, reports a case of anthrax treated by Sclavo's serum.—*Brit. M. J.* 1911, v. 2, p. 103.

Dawson, C. F., reports observations on anthrax with special reference to the production of immunity by the use of vaccine, and in cases of outbreak of disease, and of vaccine combined with anti-anthrax serum.—*Vet. J.* 1911, v. 67, pp. 524–540. See also editorial, pp. 513–514, and a comment by Deperdussin, p. 605.

Pokshishevsky, N. A. (*Arch. Vet. Sc.* Dec. 1910), reports interesting and important results from his studies of antianthrax serum.—*Am. Vet. Rev.* 1911, v. 39, p. 453.

GONOCOCCUS INFECTIONS.

Stockman, Ralph, presents a paper on the vaccine treatment of gonococcal arthritis, with a report of 11 cases and a number of charts.—*Brit. M. J.* 1911, v. 2, pp. 1465–1470.

Jamison, W. R. (*Therap. Gaz.*), discusses the principles involved in failures to secure results with gonococcus vaccines.—*J. Adv. Therap.* 1911, v. 29, pp. 234–235.

MacKinney (Pennsylvania *M. J.* Jan., 1911) discusses the use of antigenococcic serum and vaccines.—*Therap. Gaz.* 1911, v. 35, pp. 352–353.

Menzer, A. A. L. (*Münch. med. Wchnschr.*, v. 58, No. 45), insists that the ordinary methods of gonorrhoea treatment need revision; that the aim should be to favor, not to suppress, the discharge; and that after an ordinary course of treatment, the patient should be tested with gonococcus vaccine to ascertain if he be really cured.—*J. Am. M. Assoc.* 1911, v. 57, p. 2115.

MENINGOCOCCUS INFECTIONS.

Wollstein, Martha, discusses the serum treatment of influenzal meningitis and recommends the employment of an immune serum by subdural injection. To secure beneficial results it must be applied early, repeatedly, and by lumbar puncture. When possible the microscopical diagnosis should be confirmed by cultural tests.—*J. Exper. M.* 1911, v. 14, pp. 73–82.

Risel, Hans, presents a table showing the results of the serum treatment of cerebrospinal meningitis according to Flexner.—*Therap. Monatsh.* 1911, v. 25, p. 26.

Flexner, Simon, contributes a note on influenzal meningitis and its serum treatment.—*J. Am. M. Assoc.* 1911, v. 57, p. 16.

Jochmann, G. (*Deutsche med. Wchnschr.* v. 37, No. 38), reviews the history of the serotherapy of epidemic cerebrospinal meningitis, and his own experience with it.—*Ibid.* p. 1497. See also v. 56, pp. 624, 706.

PNEUMOCOCCUS INFECTIONS.

Sill, E. Mather, discusses the serum treatment of pneumonia in infants and young children, and presents some general and comparative statistics on this disease.—*Med. Rec.* 1911, v. 79, pp. 712-717.

Rosenow, E. C., presents a brief note on anaphylaxis and the toxic substances from virulent pneumococci.—*J. Am. M. Assoc.* 1911, v. 57, p. 285.

Strouse, S., in a study of phagocytic immunity in pneumococcus infections, and in pneumonia with relation to the crisis, concludes that phagocytic immunity is to a high degree specific for the organism used in immunization, and that the amount of opsonin produced in the process depends to a great extent on the virulence of the organism.—*J. Exper. M.* 1911, v. 14, pp. 109-115.

Jolliffe, C. H. H., reports some observations on the serum treatment of pulmonary affections in the horse. The sera employed were influenza antitoxin and antipneumonic sera.—*Vet. J.* 1911, v. 67, pp. 22-41.

Parant, G. (Report. Vet.), reports the successful treatment of pneumonia in a horse by antistreptococcic serum.—*Am. Vet. Rev.* 1911, v. 39, p. 205.

STREPTOCOCCUS INFECTIONS.

Risel, Hans, presents a table showing the results of the serum treatment of scarlet fever according to Fedinski.—*Therap. Monatsh.* 1911, v. 25, p. 25.

Hunting, W., comments on the relation of scarlet fever to cows' milk, and points out that milk-borne epidemics are not uncommon.—*Vet. J.* 1911, v. 67, pp. 259-268.

Nicoll, M. (*Am. J. Dis. Child.* July), reports the results of his use of antistreptococcus serum in sepsis in scarlatina, and concludes that in all severe cases of scarlet fever the serum, if attainable, should be made use of in full doses and without delay.—*J. Am. M. Assoc.* 1911, v. 57, p. 423.

An editorial (*Lancet*, 1911, v. 181, p. 531) states that the treatment of puerperal septicæmia by means of antistreptococcic serum, from which so much was anticipated on its first introduction, must be held to have proved disappointing, and comments on the report made to the American Gynæcological Society.

Polak, J. O. (*Bull. Lying-in Hosp. N. Y.* Dec.), states that in streptococcic poisoning vaccine treatment is unreliable, and is of value only when the virulence of the germ is attenuated, or when Nature has already developed a phagocytic defense.—*J. Am. M. Assoc.* 1911, v. 56, p. 1759.

RABIES.

Proescher, Frederic, reports his further experience in the preventive treatment of rabies with unchanged virus fixé.—Arch. Int. Med. 1911, v. 8, pp. 351–355.

An editorial (Brit. M. J. 1911, v. 2, p. 344) calls attention to the report of the Pasteur Institute, Paris, for the year 1910, showing the decline of rabies in France. See also Lancet, 1911, v. 181, p. 409.

The United States Correspondent (Lancet, 1911, v. 181, p. 1374) comments on the need of adequate legislation.

Ravenel, Mazyck P., comments on the prevalence of rabies in Wisconsin, and states that laboratory examination of dogs which have bitten people shows about 50 per cent of them rabid. Lack of muzzling laws makes control difficult both in this State and throughout the country.—J. Am. M. Assoc. 1911, v. 57, p. 315.

Stimson, A. M., considers the problem of controlling hydrophobia in the human subject.—*Ibid.* pp. 1128–1130.

Antirabic vaccine prepared according to the method of the Hygienic Laboratory, Washington, D. C., is now being marketed by several manufacturers.—*Ibid.* v. 56, p. 1195.

The London Correspondent (*Ibid.* p. 572) quotes David Semple as authority for the statement that an efficient antirabic vaccine can be made from the dead virus. In addition to safety, the method possesses the great advantage of withstanding shipment, which the living virus does not.

Webb, E. Clive, reports a study of rabies and its control in India.—Vet. J. 1911, v. 67, pp. 93–105, 157–166.

An editorial (Brit. M. J. 1911, v. 2, p. 392) calls attention to the recent work of D. Semple on the preparation of a simple and efficient antirabic vaccine.

A number of references on rabies will be found in Hyg. Rundschau. See also Exper. Sta. Rec.; Index Med.; and J. Am. M. Assoc.

SYPHILIS.

Toraude, L. G., presents a note on the treatment of syphilis by Quéry's organic serum.—Bull. sc. pharmacol. 1911, v. 18, Annexes, pp. 13–17.

Marinesco, G. (Rif. Med. v. 27, No. 1), injected a few syphilitics with serum from other syphilitics who had been injected with salvarsan, but the results were disappointing.—J. Am. M. Assoc. 1911, v. 56, p. 707.

Reasoner and Matson, reporting on their use of salvarsan in the U. S. Army, assert that no dependence can be placed on the Wassermann test as a danger signal.—*Ibid.* v. 57, p. 1228.

Bayly, H. Wansey, summarizes in a tabular statement the comparative value of the various methods of antisyphilitic treatment as estimated by the Wassermann reaction.—*Lancet*, 1911, v. 181, p. 1332.

Matson and Reasoner report some observations on the influence of treatment on the Wassermann reaction in syphilis. They conclude that the Wassermann reaction not only reveals the nature of the disease, but it serves as a guide for individualizing treatment.—*Tr. Am. M. Assoc. Sec. Pharm. & Therap.* 1911, pp. 325-339. Also *J. Am. M. Assoc.* 1911, v. 57, pp. 1670-1675.

v. Wassermann, A., discusses the nature and the practical importance of serum diagnosis of syphilis.—*Pharm. Post*, 1911, v. 44, pp. 567-568.

Keidel, Albert, contributes a paper on the value of the Wassermann reaction.—*J. Am. M. Assoc.* 1911, v. 57, p. 1659.

Citron, Julius, discusses the value of the Wassermann reaction for the therapy of syphilitics.—*Therap. Monatsh.* 1911, v. 25, pp. 421-428.

Herold, A. A., states that probably the greatest utility of the Wassermann reaction is in cases which give a perfect history of infection, but where we are not satisfied that the treatment which they have undergone has cured them.—*J. Am. M. Assoc.* 1911, v. 57, p. 154.

For additional references see Wassermann reaction, under Clinical Tests; also *Index Med.*; and *J. Am. M. Assoc.*

TYPHOID.

Risel, Hans, presents a table showing the results of the treatment of typhoid fever with a Chantemesse serum.—*Therap. Monatsh.* 1911, v. 25, p. 27.

The Paris Correspondent (*J. Am. M. Assoc.* 1911, v. 57, p. 750) states that the Minister of War has entrusted to Chantemesse and Vincent the task of applying among the troops on the Algerian and Moroccan frontier the method of antityphoid vaccination.

Courmont and Rochaix present a brief note on antitoxic immunization by intestinal antityphoid vaccination.—*Compt. rend. Acad. sc.* 1911, v. 152, p. 1027. See also *J. Phys. et Path. gén.* 1911, v. 13, pp. 942-954.

An editorial (*J. Am. M. Assoc.* 1911, v. 56, p. 1884) reviews the present status of antityphoid vaccination. See also p. 1460.

Courmont and Rochaix discuss immunization by the intestinal route in connection with antityphoid vaccination. They consider the method inoffensive and applicable to man.—*Compt. rend. Acad. sc.* 1911, v. 152, p. 797.

They assert that the introduction of vaccine toxins into the intestines by ingestion, or preferably by flushing, may produce immunity.—*J. Pharm. et Chim.* 1911, v. 3, p. 601.

Nelson and Hall describe a rapid method of inoculation against typhoid fever, as practiced in some 3,500 injections in the U. S. Army.—*J. Am. M. Assoc.* 1911, v. 57, pp. 1759–1761.

Lambert, Alexander, asserts that typhoid vaccination has reduced the morbidity more than one-half and the mortality by considerably more than this.—*Ibid.* v. 56, p. 1679.

Russell, F. F., in an article on the prevention and treatment of typhoid fever with antityphoid vaccine, concludes that vaccination is simple and harmless and wherever used has reduced the incidence and mortality of typhoid.—*Boston M. & S. J.* 1911, v. 164, pp. 1–8. See also editorials, pp. 28, 63.

Bass, C. C., asserts that doctors, nurses, and others frequently exposed to typhoid infection should take advantage of vaccination. The agglutination test should be used both to determine when immunity has been secured and as a guide to vaccination, also as a check on vaccines with low immunizing powers.—*J. Am. Assoc.* 1911, v. 57, p. 154.

Richardson, Mark Wyman, discussing antityphoid inoculation as introduced into certain training schools for nurses in Massachusetts, states that 405 individuals have been inoculated.—*Boston M. & S. J.* 1911, v. 164, pp. 8–10.

Fletcher, John P., describes a rational indication for bacterial vaccine in typhoid fever.—*J. Am. M. Assoc.* 1911, v. 56, pp. 1102–1104. See also p. 1016.

The Paris Correspondent (*Lancet*, 1911, v. 180, p. 407) calls attention to a valuable report by Vincent on antityphoid vaccination, which he recommends as a rational means of notably diminishing the frequency and severity of typhoid fever.

Watters and Eaton report clinical observations on the vaccine treatment of typhoid fever.—*Med. Rec.* 1911, v. 79, pp. 797–802.

An unsigned review calls attention to several articles on antityphoid vaccination and quotes the statement that 3 per cent of all persons who have had typhoid fever are typhoid carriers.—*J. Adv. Therap.* 1911, v. 29, pp. 99–100.

Brem and Watson review the literature on the treatment of typhoid bacillus carriers. Eleven recoveries, excluding their own case, have occurred. Five of these patients recovered during vaccination with autogenous vaccines.—*Arch. Int. Med.* 1911, v. 8, pp. 630–638.

Middleton, William S., reports observations on the efficiency of typhoid vaccines prepared at different temperatures.—*Therap. Gaz.* 1911, v. 35, pp. 473–476.

See also Elliot, J. B., Jr.—*J. Am. M. Assoc.* 1911, v. 57, p. 1861.

For additional references see *Index Med.*; and *J. Am. M. Assoc.*

PLAGUE.

Sinclair, A. N., reports on the Yersin-Roux serum in the treatment of 3 cases of plague. From his limited observations he is inclined to believe that this serum can do no harm and may do incalculable good.—J. Am. M. Assoc. 1911, v. 56, pp. 332-335.

Zinsser, McCoy, and Chapin report on the protective influence of leucocytic substances upon experimental plague infection in rats.—J. Med. Research, 1911, v. 24, pp. 483-490.

VENINS.

Massol, L., presents a note on the action of the radiations of a quartz mercury vapor lamp on cobra venom and its antitoxin.—Compt. rend. Soc. Biol. 1911, v. 71, p. 183.

Aperlo, G. (Policlinico, v. 18, Sept., Surg. Sec. No. 9), has applied Calmette's cobra venom test in 15 cases of surgical tuberculosis, 3 of sarcoma, 4 of carcinoma, and 8 with various other surgical affections. The reaction was positive in all the sarcoma cases and negative in carcinoma.—J. Am. M. Assoc. 1911, v. 57, p. 1577.

Arthus and Stawska present a communication of venins and antitoxins.—Compt. rend. Acad. Sc. 1911, v. 153, p. 355.

Arthus, Maurice, presents a communication on the specificity of antivenomous serums; anticobra serums and venins of *Naja bungarus* and *Bungarus cæruleus*.—*Ibid.* pp. 394-397. See also pp. 482-484.

CANCER.

Risley, Edward H., discusses the treatment of cancer with body fluids and cancerous ascitic fluid. His conclusions based upon a study of some 65 cases are on the whole unfavorable, save for temporary symptomatic relief.—J. Am. M. Assoc. 1911, v. 56, pp. 1383-1389. See also Boston M. & S. J. 1911, v. 165, pp. 784-788.

Ransohoff, J. Louis, presents a preliminary report of his study of anaphylaxis in carcinoma, which he thinks may develop into an aid to early diagnosis of this condition.—J. Am. M. Assoc. 1911, v. 57, p. 103.

Levin, Isaac, contributes studies on immunity in cancers of the white rat; the significance of the specific stroma reaction.—J. Exper. M. 1911, v. 14, pp. 139-147.

Gaylord, Harvey, discussing the present status of cancer immunity, states that cases which show improvement give, in course of time, a Wassermann reaction equal to a marked syphilitic reaction. This reaction is a mark of growing immunity. A blood reaction, known as the antitryptic reaction, gives good indications of the progress of the case and enables one to tell when metastases are occurring.—J. Am. M. Assoc. 1911, v. 56, p. 1506.

Lambert and Hanes present a study of cancer immunity by the method of cultivating tissues outside the body.—*J. Exper. M.* 1911, v. 13, pp. 505–510; see also Levin and Sittenfield, pp. 511–520.

SERPENTARIA.

Lloyd, John Uri, states that serpentaria is by some believed to have been first mentioned in 1636 by Thomas Johnson, an apothecary of London. The early use of serpentaria in America was as a remedy for snake bite.—*Bull. Lloyd Libr.* 1911, No. 18, pp. 81–82.

The Committee of Reference in Pharmacy (Third Report, p. 30) proposes that serpentariae rhizoma yield not more than 10 per cent ash. See also *Pharm. J.* 1911, v. 87, p. 710.

True, R. H., reports that serpentaria is relatively an easy thing to grow but requires shade.—*Proc. N. W. D. A.* 1911, p. 168.

Schneider, Albert, outlines the histology of serpentaria, which is often of very poor quality with excess of dirt, sand, refuse, and foreign roots.—*Merck's Rep.* 1911, v. 20, p. 3.

Lesueur, M., contributes a paper on the presence of saccharose in the dried roots of certain plants of the family *Aristolochiaceae*.—*J. Pharm. et Chim.* 1911, v. 3, pp. 399–401.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 4) recommends that tincture of serpentaria be made with 60 per cent alcohol. See also *Pharm. J.* 1911, v. 87, p. 847.

SEVUM PRÆPARATUM.

Hartwich, C., in discussing the Ph. Germ. V, points out that the permissible melting point of tallow has been broadened somewhat and is now 45 to 50°; the iodine number is given as ranging from 33 to 42; and the acid number as not over 5.—*Apoth.-Ztg.* 1911, v. 26, p. 86.

See also *Pharm. J.* 1911, v. 86, p. 654, and *Chem. & Drug.* 1911, v. 78, p. 260.

Alpers, Karl, notes that the Ph. Germ. V monographs for lard, suet, brandy and wine make it necessary that the apothecary acquaint himself with the laws relating to the composition of these several articles.—*Pharm. Ztg.* 1911, v. 56, p. 35.

The Committee of Reference in Pharmacy (Third Report, p. 30) proposes for prepared suet a melting point of 45° to 50°; saponification value, 192 to 195; iodine value, 33 to 46; acid value, not over 2.0; refractive index at 60°, 1.4490 to 1.4510. The statements which at present appear as to its solubility in petroleum spirit, benzol, alcohol, and ether are omitted. See also *Pharm. J.* 1911, v. 87, p. 710.

Wild, R. B., gives the melting point of suet as 49–50°.—*Brit. M. J.* 1911, v. 2, p. 161.

Weinstein, Joseph, reports on 6 samples of *sebum præparatum*, 2 of which consisted of mixtures of lard and wax.—Proc. New York Pharm. Assoc. 1911, p. 151.

A news note (Brit. Food J. 1911, v. 13, p. 40) reports on a sample marked "suet," which was certified by the public analyst to contain 100 per cent cocoanut oil.

SINAPIS.

Lloyd, John Uri, states that black mustard is an herb found over the whole of Europe, excepting the extreme north. It was known to the ancients and in early times seems to have been used more as a medicine than as a condiment.—Bull. Lloyd Libr. 1911, No. 18, p. 82.

Mitlacher, Wilhelm, reports observations on the cultivation of *Sinapis alba*.—Pharm. Post, 1911, v. 44, p. 216.

Tunmann, O., states that the imports of mustard seed into Germany in 1909 amounted to 5,960,000 kilos, of which one half came from Russia; Italy, Holland, and British India furnishing the greater part of the other half.—Apoth.-Ztg. 1911, v. 26, p. 580.

Schneider, Albert, outlines the histology of mustard and states that it is very extensively adulterated with flour and curcuma, capsicum, wild mustard, rape seed, exhausted mustard, mustard hulls, etc.—Merck's Rep. 1911, v. 20, p. 3.

Hartwich, C., points out that the Ph. Germ. V has increased the permissible size of mustard seed from 1 mm. to 1.5 mm. The minimum content of volatile oil has been raised to 0.7 per cent, which is rather low for *Brassica nigra*, which usually contains 0.8 per cent or more.—Apoth.-Ztg. 1911, v. 26, p. 94.

See also Pharm. J. 1911, v. 86, p. 296.

The Committee of Reference in Pharmacy (Third Report, p. 31) recommends that sinapis be described as "mustard of commerce" and placed in the appendix, and proposes slight modifications in the description of white and black mustard. See also Pharm. J. 1911, v. 87, p. 710.

Dohme and Engelhardt recommend an estimation of allylthiocyanate.—Am. J. Pharm. 1911, v. 83, p. 525.

Lenormand criticizes the Ph. Germ. V process for the estimation of starch in mustard.—Répert. pharm. 1911, v. 23, p. 493.

Domergue, A., describes and illustrates a method for the valuation of mustard.—J. Pharm. et Chim. 1911, v. 4, p. 494.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 136-137) discuss the valuation of mustard seed, and present a table showing the volatile oil content requirements and the limitations for ash included in several pharmacopœias.

Schneider, Albert, reports on 31 samples of mustard, 8 of which, or 25.8 per cent, were adulterated with cereal and curcuma.—Pacific Pharm. 1911, v. 5, p. 177.

Food Inspection Decision 137 (June 16, 1911) states that the seed of charlock (*Brassica arvensis* L.) is being substituted by some manufacturers, in whole or in part, for that of the true mustards.

A news note (Brit. Food J. 1911, v. 13, p. 200) reports a sample of ground mustard which was found to contain 8 per cent of foreign starch.

The Biennial Report of the Inspection of Pharmacies, 1909-10, calls attention to the fact that the official mustard is a mixture of black and white mustard seeds. This requirement is not well observed and a black mustard is frequently delivered.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 229. Also J. Pharm. Anvers, 1911, v. 67, p. 517.

Diekman, George C., reports the opinion that the spreading and preparation of mustard plaster is an art of the past and may as well be dismissed. A standard, however, should be given.—Proc. New York Pharm. Assoc. 1911, p. 82.

Hasterlik, A. (Verlag A. Hartleben. 56 fig. 3 Taf. Wien und Leipzig, 1910), discusses mustard and the technical uses of the mustard plant.—Bot. Centralb. 1911, v. 116, p. 382.

SODII ACETAS.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 581) points out that the solubility in alcohol is given as 1 in 29 instead of 1 in 23.

White, Edmund, describes sodium acetate, enumerates the several tests to be applied to it, and notes that if in clean white crystals it is usually fairly pure.—*Ibid.* p. 250.

SODII ARSENAS.

The Committee of Reference in Pharmacy (Third Report, p. 31) recommends that the dried salt be retained on account of its more definite nature. As the International Agreement has adopted the name "sodii arsenas" for the salt containing 7 molecules of water, the name of the official drug should be altered to "Sodii arsenas exsiccatus." It should be required to contain at least 98 per cent of sodium arsenate, Na_2HAsO_4 ; the tests should remain as at present, but it should be required to lose not more than 2 per cent of moisture when dried at 149° . See also Pharm. J. 1911, v. 87, p. 31.

Bourdet criticises the Ph. Fr. V assay of sodium arsenate and suggests that it be estimated under the form of magnesium pyroarsenate.—J. Pharm. et Chim. 1911, v. 4, p. 115.

Smith, Kline & French Co. (Analytical Report, 1911, p. 41) reports that one of the 4 samples of sodium arsenate examined contained a considerable amount of chlorides and sulphates.

The Biennial Report of the Inspection of Pharmacies, 1909-10, notes the finding of sodium arsenate with 12 molecules of water in

place of the officinal, which has 7 molecules of water.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 232. Also J. Pharm. Anvers, 1911, v. 67, p. 521.

According to the Paris Correspondent (*Lancet*, 1911, v. 181, p. 192) Cazeneuve has noted an increase in the number of accidents occurring among vineyard employees from arsenical substances used as insecticides.

Gunn and Feltham conclude that arsenic, whether in the form of sodium arsenite or sodium arsenate, exerts on the red blood corpuscle an action antagonistic to that of certain hæmolytic agents.—Brit. M. J. 1911, v. 1, p. 134.

SODII BENZOAS.

The Committee of Reference in Pharmacy (Third Report, p. 31) recommends that sodium benzoate be required to contain at least 95 per cent of sodium benzoate, $\text{NaC}_7\text{H}_5\text{O}_2$, thus allowing the presence of 4 per cent of moisture; the present test should be altered accordingly. See also Pharm. J. 1911, v. 87, p. 710.

The Paris Pharmaceutical Society recommends the anhydrous salt, and certain modifications in the description and assay statements.—J. Pharm. et Chim. 1911, v. 4, p. 543.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 64) report that 2 samples of sodium benzoate were slightly below strength, testing volumetrically as 95.6, 96.4 per cent; moisture, however, was excessive at 3.6 to 4.4 per cent, the normal amount being 2 per cent or less. The Ph. Germ. V permanganate reduction test is no criterion of a natural origin; and, moreover, the best synthetic acid and salts contain no detectable chloride.

Jones, Ernest R., reports that the minimum satisfactory test for sodium benzoate in milk is 1 part in 8,000.—Apothecary, June, 1911, v. 23, p. 16.

An editorial (J. Am. M. Assoc. 1911, v. 57, p. 1620) comments on some irrational governmental decisions on sodium benzoate.

An editorial (Drug Topics, 1911, v. 26, p. 353) calls attention to an article by Graham Lusk, endorsing the work of the Remsen Board in connection with sodium benzoate. See also p. 113.

An editorial (J. Am. M. Assoc. 1911, v. 57, p. 1541) calls attention to the "Expert Opinion of the Royal Scientific Deputation for Medical Affairs Regarding the use of Benzoic Acid and its Salts for the Preservation of Food." See also p. 1770.

Mendel, LaFayette B., calls attention to a misrepresentation of the report of the "Royal Scientific Deputation" on sodium benzoate.—*Ibid.* p. 2016.

Pearson, William A., points out that one of the strongest arguments brought out against the use of sodium benzoate is that it

enables manufacturers to market products that could not otherwise be sold. This is only partly true, however, as any product that is sterilized and hermetically sealed will not putrefy if kept indefinitely, and any product, no matter how filthy, can be marketed in this way.—Hahnemann. Month. 1911, v. 46, p. 568.

Carmichael, T. H., asserts that the American Institute of Homœopathy neither condemns nor favors the use of sodium benzoate and other substances in the preservation of foods.—J. Am. Inst. Homœop. 1911, v. 3, p. 223.

SODII BICARBONAS.

Düsterbehn, F., points out that the Ph. Germ. V now gives the solubility of sodium bicarbonate in water at 15° as about 1:12.—Apoth.-Ztg. 1911, v. 26, p. 226.

Linke, H., thinks that the Ph. Germ. V test for carbonate in sodium bicarbonate has been materially improved by the omission of the hydrochloric acid.—Ber. pharm. Gesellsch. 1911, v. 21, p. 192.

White, Edmund, enumerates some of the tests for sodium bicarbonate and points out that the commercial article can now be purchased of very fair purity. It usually contains some carbonate with traces of chloride and sulphate.—Pharm. J. 1911, v. 86, p. 319.

Berger discusses the constitution of sodium bicarbonate.—Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, pp. 48–49.

Caven and Sand discuss the dissociation pressures of alkali bicarbonates, and report a number of experiments with sodium hydrogen carbonate.—J. Chem. Soc. Lond. 1911, v. 99, pp. 1359–1369.

McCoy and Test report observations on the equilibrium between sodium carbonate, sodium bicarbonate, and water.—J. Am. Chem. Soc. 1911, v. 33, pp. 473–476.

de Paepe, Désiré, presents some observations on the reciprocal solubility of sodium carbonate and of sodium bicarbonate in water.—Bull. Soc. chim. Belg. 1911, v. 25, pp. 173–177.

Herzen, Edouard, comments on the report by de Paepe.—*Ibid.* pp. 227–234. de Paepe replies, pp. 413–420.

Bachman, Gustav, reports that the sample of sodium bicarbonate analyzed by him was 98.7 per cent pure.—Proc. Minnesota Pharm. Assoc. 1911, p. 101.

Smith, Kline & French Co. (Analytical Report, 1911, p. 41) reports that 1 of the 4 samples of sodium bicarbonate examined contained a trace of chlorides and a slightly excessive amount of iron.

Scheringa, K., reports finding a sample of sodium bicarbonate contaminated with zinc hydroxycarbonate.—Pharm. Weekblad, 1911, v. 48, pp. 1353–1354.

An unsigned article (Rep. Chem. Lab. Am. M. Assoc. 1911, v. 4, pp. 72–75) discusses the incompatibility of antipyrine, calomel, and

sodium bicarbonate, and reports analyses showing the dangerous amount of soluble salt of mercury present.

The French Council of Public Health, under date of January 24, 1910, absolutely forbids the addition of sodium bicarbonate to milk.—*Ann. falsif.* 1911, v. 4, p. 647.

Jones, Ernest R., reports that the minimum satisfactory test for sodium bicarbonate in milk is 1 part in 400.—*Apothecary*, June, 1911, v. 23, p. 16.

Weinstein, writing in the *Medical Record* of April 29, 1911, says of the alkalis that there are chiefly four, sodium carbonate and bicarbonate, magnesium oxide, also called calcined magnesia or magnesia usta, and ammonium magnesium phosphate.—*Therap. Gaz.* 1911, v. 35, pp. 582-583.

Hoyle, E. Petrie, contributes a paper on sodæ bicarbonate in heroic dosage (640 grains per day), the only relief in a grave case of vomiting of pregnancy.—*J. Am. Inst. Homœop.* 1911, v. 3, p. 918.

The Paris Correspondent (*J. Am. M. Assoc.* 1911, v. 57, p. 231) quotes Marcel Labbe and others who have called attention to the treatment of acidosis or diabetic ascetonæmia by intravenous injections of sodium bicarbonate.

An editorial (*Lancet*, 1911, v. 181, p. 960) comments on the dangers of intravenous injection of alkaline solutions.

Additional references on the chemistry, pharmacology, and therapeutic uses of sodium bicarbonate will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Exper. Sta. Rec.*; *Zentralbl. Biochem. u. Biophysik*; and *Chem. Centralbl.*

SODII BORAS.

Düsterbehn, F., states that the Ph. Germ. V describes borax as melting in its own water of crystalization. On continued heating the water is driven off and the borax melts to a glass-like mass. The solubility in cold water is given as 1:25, and the substance is described as being nearly insoluble in alcohol.—*Apoth.-Ztg.* 1911, v. 26, p. 155.

See also *Pharm. J.* 1911, v. 86, p. 581.

White, Edmund, describes sodium baborate, enumerates some of the tests for the article, and describes the trade varieties.—*Pharm. J.* 1911, v. 86, p. 319.

Johnson, W., calls attention to a sample of "ordinary double refined borax," which contained 99.5 per cent of real borax and as much as 200 parts of arsenic per million.—*Pharm. J.* 1911, v. 87, p. 871. Also *Chem. & Drug.* 1911, v. 79, p. 933.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 16) report on 61 samples of borax, all of which contained 5 parts per million of arsenic or less, except 2, these reaching 8 and 80 parts, respectively. Lead was practically absent in all cases.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 34) consider that, as a fair standard, borax sold for pharmaceutical purposes should contain not more than 4 parts per million of arsenic.

An unsigned note (Pharm. J. 1911, v. 87, p. 502) states that to distinguish sodium perborate from borax a little potassium bichromate solution is added to the aqueous solution, which is then shaken with ether. In presence of perborate the ether is colored blue by perchromic acid, the reaction is also given by potassium percarbonate, but not by ammonium persulphate, or potassium perchlorate.

Gehe & Co. (Handelsbericht, 1911, p. 113), in commenting on the market conditions for boric acid and borax, point out that the chief use for borax is in the production of enameled iron ware.

SODII BROMIDUM.

Düsterbehn, F., in a review of the Ph. Germ. V, notes that the solubility of sodium bromide is now given as 1:12. Anhydrous sodium bromide is required to be at least 99.3 per cent pure and the official salt is restricted to 5 per cent moisture.—Apoth.-Ztg. 1911, v. 26, p. 232. See also Pharm. J. 1911, v. 86, p. 582, and Chem. & Drug. 1911, v. 78, p. 79.

The Paris Pharmaceutical Society recommends a slight modification in the description of sodium bromide, admitting the amorphous powder in granulated form.—J. Pharm. et Chim. 1911, v. 4, p. 543.

The Committee of Reference in Pharmacy (Third Report, p. 31) proposes that titration of the dried salt with volumetric solution of silver nitrate should indicate a minimum of 99 per cent of sodium bromide, NaBr, and the official test should be corrected accordingly. The salt should contain not more than 5 per cent of moisture. The tests for thiocyanates and barium should be omitted. See also Pharm. J. 1911, v. 87, p. 710.

Goldbaum, Jacob S., in a report on the determination of the ratio between chlorine and bromine and sodium, outlines the method employed for the preparation of pure sodium bromide.—J. Am. Chem. Soc. 1911, v. 33, p. 38.

Baxter and others report observations on the refractive power of halogen salts, and on the changes in volume upon solution in water of sodium bromide.—*Ibid.* pp. 901–922, 925.

Richards and Jones report observations on the compressibility of the chlorides, bromides, and iodides of sodium, and other bases.—Ztschr. physik. Chem. 1910, v. 71, pp. 152–190.

Prochnow, Lucy, reports a study of the action of haloid salts of sodium on the smooth muscles of the walls of the uterus.—Arch. internat. pharmacod. et therap. 1911, v. 21, pp. 287–312.

SODIUM CACODYLATE.

Long, J. H., reports successful results from the use of sodium cacodylate in four cases of syphilis.—*J. Am. M. Assoc.* 1911, v. 57, p. 23.

An unsigned article (*Drug. Circ.* 1911, v. 55, pp. 255–256) reviews the literature, physical properties, therapeutics, chemistry, and pharmacy of sodium cacodylate.

Dixon, W. E., declares that the cacodylates are almost non-poisonous, and pass, for the most part, through the body unchanged; a small percentage, however, is oxidized, and from this the arsenic is set free in ionic form; so that, if such a drug be taken for some weeks, this trace of arsenic exerts a mild arsenical action.—*Pharm. J.* 1911, v. 87, p. 16.

Suggett, O. L., contributes a note on sodium cacodylate in the treatment of syphilis, with a report of 10 cases.—*N. York M. J.* 1911, v. 93, pp. 674–676.

See also Schirrmann, Harry A., *Ibid.* p. 676.

Crigler, L. W., reports a case of tertiary syphilis treated with sodium cacodylate.—*J. Am. M. Assoc.* 1911, v. 56, p. 897.

Caffrey, A. J., contributes a second note on sodium cacodylate in syphilis, with which he has got just as good results as with salvarsan.—*J. Am. M. Assoc.* 1911, v. 56, p. 641.

An unsigned article (*Merck's Arch.* 1911, v. 13, pp. 51–52) calls attention to some recent articles on sodium cacodylate (or sodium dimethylarsenate), and points out that experience has shown the cacodylates to be less toxic than arsenites or than atoxyl, so that they may be given in comparatively large doses, even to children.

Additional references on the chemistry, pharmacology, and therapeutic uses of sodium cacodylate will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Zentralbl. Biochem. u. Biophysik*; and *Chem. Centralbl.*

SODII CARBONAS MONOHYDRATUS.

Frerichs, F. W., describes with illustrations the plant of the Kentucky Soda Ash Company. He points out that cheap salt and fuel are essential for the successful production of soda ash.—*Tr. Am. Inst. Chem. Eng.* 1911, v. 4, 1912, pp. 116–133.

Jurisch, Konrad W., discusses with illustrations the production of ammonia soda at Dieuze.—*Chem. Ind.* 1911, v. 34, pp. 73–75.

Mason, William, discusses the manufacture of ammonia alkali in England, and calls attention to different methods of working the processes.—*Chem. Eng.* 1911, v. 13, pp. 100–102.

Düsterbehn, F., in a review of the *Ph. Germ.* V, points out that the solubility of sodium carbonate in water at 15° is given as about 1:1.6.

Also describes it as being difficultly soluble in alcohol. The official article should contain at least 37.1 per cent of anhydrous carbonate.—*Apoth.-Ztg.* 1911, v. 26, p. 232.

See also *Pharm. J.* 1911, v. 86, p. 582, and *Chem. & Drug.* 1911, v. 78, p. 79.

Linke, H., notes that because of the absorption of moisture sodium carbonate frequently assays below the official 37.1 per cent of Na_2CO_3 .—*Ber. pharm. Gesellsch.* 1911, v. 21, pp. 192–193.

The Committee of Reference in Pharmacy (Third Report, p. 31) recommends that sodium carbonate be required to contain 99 per cent of sodium carbonate, Na_2CO_3 , 10 H_2O . See also *Pharm J.* 1911, v. 87, p. 710.

White, Edmund, discusses the composition of sodium carbonate crystals and of sodium carbonate anhydrous, enumerates some of the tests for these articles, and concludes that soda crystals, or washing soda, is now in the market of high degree of purity, the total amount of impurities not being more than a few units per cent.—*Pharm. J.* 1911, v. 86, p. 319.

Brown, Linwood A., notes that sodium carbonate may be obtained with 10 molecules of water (37 per cent Na_2CO_3); dried sodium carbonate containing about 80 per cent Na_2CO_3 ; sodium carbonate fused; sodium carbonate anhydrous (99–100 per cent); and the official monohydrated sodium carbonate (85 per cent Na_2CO_3) for pharmaceutical use.—*Proc. Kentucky Pharm. Assoc.* 1911, p. 91.

McCoy and Test report observations on the equilibrium between sodium carbonate, sodium bicarbonate, and water.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 473–476.

Ketner, C. H., reports some observations on the solubility of sodium carbonate at different temperatures and under different conditions.—*Chem. Weekblad*, 1911, v. 8, pp. 391–393.

de Paepe, Désiré, presents some observations on the reciprocal solubility of sodium carbonate and of sodium bicarbonate in water.—*Bull. Soc. chim. Belg.* 1911, v. 25, pp. 173–177.

See also comments by Herzen, *Ibid.* pp. 227–234, and reply by de Paepe, pp. 413–420.

A news note (*Brit. Food J.* 1911, v. 13, p. 119) reports a sample of soda which on examination was found to consist of 30.01 per cent of sodium carbonate, or washing soda, and 60.99 per cent of sodium sulphate, or Glauber's salts. See also pp. 179–180.

Smith, Kline & French Co. (Analytical Report, 1911, p. 41) reports that 1 of the 14 samples of monohydrated sodium carbonate examined contained an excessive amount of moisture and 1 an excessive amount of heavy metals and chlorides.

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SODI CHLORIDUM.

An unsigned note (J. Ind. & Eng. Chem. 1911, v. 3, p. 950) states that the United States produced 30,305,656 barrels of salt in 1910, the six leading producers being New York, Michigan, Ohio, Kansas, Louisiana, and California. Nearly 99 per cent of the salt consumed in the country was obtained from domestic sources.

The Consular and Trade Reports (Aug. 16, 1911, p. 723) announces that for the fiscal years ending June 30, 1909 and 1910, the imports of salt into the United States amounted to 274,455,157 pounds and 296,200,273 pounds, respectively; exports, 66,474,294 and 83,816,808 pounds.

Düsterbehn, F., in a review of the Ph. Germ. V, points out that the solubility of sodium chloride in water is given as 1:2.9. A trace of iron is now permitted.—Apoth.-Ztg. 1911, v. 26, p. 233.

The Committee of Reference in Pharmacy (Third Report, p. 31) proposes that the solubility of sodium chloride in water be stated as 1 in 3. Twenty cubic centimeters of a 5 per cent aqueous solution should not afford a blue color, immediately after the addition of 0.5 cubic centimeter of test solution of potassium ferrocyanide (absence of more than traces of iron). See also Pharm. J. 1911, v. 87, p. 710.

White, Edmund, enumerates the tests for sodium chloride to be used as a reagent, and states that table salt usually contains traces of iron and sufficient magnesium or calcium chloride to render the salt deliquescent. Pure sodium chloride is not hygroscopic.—Pharm. J. 1911, v. 86, p. 319.

Rosenthaler, L., discusses the hydrargyrometric estimation of chlorides, reports a number of results obtained by him, and points out that these results are variable and that the method does not appear to be applicable to chlorides.—Arch. Pharm. 1911, v. 249, pp. 256-257. See also p. 400 for correction.

Richards, Joseph W., states that common salt is one of the cheapest of natural chemicals and that even though it has uses of its own, it is interesting chiefly for the products that can be obtained from it. He outlines some of the electrolytic processes used in the conversion of salt into sodium hydroxide and chlorine gas.—Sc. Am. Suppl. 1911, v. 71, p. 50.

Goldbaum, Jacob S., in a report on the determination of the relation between chlorine and bromine and sodium, outlines the method employed for the preparation of pure sodium chloride.—J. Am. Chem. Soc. 1911, v. 33, p. 38.

Baxter and others report on the refractive power of halogen salts, and on the changes in volume upon solution in water of sodium chloride.—*Ibid.* pp. 901-922, 924.

Richards and Jones report observations on the compressibility of the chlorides, bromides and iodides of sodium, potassium, silver, and thallium.—Ztschr. physik. Chem. 1910, v. 71, pp. 152-190.

Friend and Brown discuss the action of salt solutions and of sea water on iron at various temperatures.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 1302–1306.

Federici, E., comments on the incompatibility of calomel and sodium chloride.—*Boll. chim. farm.* 1911, v. 50, p. 314. See also De Bella, p. 657; and Riccardielli, p. 950.

An unsigned review of the Ph. Germ. V (*Chem. & Drug.* 1911, v. 78, p. 632) states that the physiological saline solution is required to contain sodium chloride 8 gm., sodium carbonate 0.15 gm., and water 991.85 gm.

“C. N.,” in commenting on the Ph. Germ. V requirement that physiological salt solution be dispensed in a sterile condition, points out that this preparation is frequently desired for immediate use and that extemporaneous sterilization is not practical. He recommends that an appreciable quantity of the preparation thoroughly sterilized be kept on hand by the apothecary.—*Pharm. Ztg.* 1911, v. 56, p. 57.

Constituents of artificial serums.

[Parts in 100 parts of sterile water.]

	Sodium chloride.	Sodium chloride.	Sodium sulphate.	Sodium phosphate.	Sodium carbonate.	Sodium bicarbonate.	Sodium lactate.	Potassium chloride.	Potassium sulphate.	Calcium chloride.
Normal saline.....	0.95									
Cantani.....	.4				0.2					
Croce.....				0.2						
Dujardin-Beaumez.....	.31			.95	.1		0.1		0.1	
Hayem (1).....	.5		0.1							
Hayem (2).....	.75									
Hérard.....	.45	0.05		.125				0.025		
Huchard.....	5.0		2.5	10.0						
Latta.....	1 to 1.5				.05					
Leleuc.....	4.0		.5	.5						
Locke.....	.9							.01		0.025
Luton.....			10.0	4.0						
Marshall.....	.8					0.1				
Ringer.....	.95					.015		.025		.02
Rogers (cholera).....	1.14							.07		.046
Roussel.....				5.0						
Sapelier.....	6.0			.45	3.1			.5	.35	
Schless.....	7.5					5.0				
Sydman.....	.6					.1				
Trunczek.....	4.92		.44	.15	.21				.4	
Vandevelde.....	3.0			3.0	2.5			3.0	2.0	

Based on a table published by *Drug. Circ.* 1911, v. 55, p. 695, credited to the *Prescriber*. See also *Drug Topics*, 1911, v. 26, p. 355; *Pharm. Prax.* 1911, v. 10, pp. 126–127; and *J. Pharm. Elsass-Lothr.* 1911, v. 38, pp. 71–73.

Evans, George H., discusses the abuse of normal salt solution, and urges a more restricted and discriminating use of this therapeutic measure.—Tr. Am. M. Assoc. Sec. Pharm. & Therap. 1911, pp. 272-276. Also J. Am. M. Assoc. 1911, v. 57, p. 2126.

Hort and Penfold conclude that saline injections as at present administered are by no means free from risk, especially when they are large.—Brit. M. J. 1911, v. 2, p. 1589.

Armstrong, A. Keith, reports a case of eclampsia, coming on 5 hours after delivery, successfully treated by saline infusion.—*Ibid.* v. 1, p. 82.

Selig, Arthur, reports some experimental observations on the action of Ringer's solution and of solution of sodium chloride on the circulation.—Ztschr. exper. Path. u. Therap. 1911, v. 9, pp. 417-426.

Nothdurft, Rudolf, reports experimental results with bleeding accompanied by the simultaneous substitution of equal quantities of physiological salt solution.—*Ibid.* pp. 340-351.

Rogers, Leonard, presents a note on the use of hypertonic salines, controlled by estimations of the specific gravity of the blood in infantile diarrhoea.—Brit. M. J. 1911, v. 2, p. 1404.

Rood, Felix, discusses the use of normal saline infusion as a means of administering ether, with a tabulated summary of some 21 cases.—*Ibid.* pp. 974-976.

Freund, Hermann, reports a number of experiments on sodium chloride fever.—Arch. exper. Path. u. Pharmacol. 1911, v. 65, pp. 225-238.

Bingel, Adolf, presents some observations on salt and sugar fever and tables giving a compilation of cases.—*Ibid.* 1910-11, v. 64, pp. 1-28.

Fischer and Gruenert conclude that sodium chloride is far superior to any of the other known preservatives for preventing the decomposition of butter and other fats.—Ztschr. Unters. Nahr. u. Genussm. 1911, v. 22, pp. 553-582.

A number of additional references on the chemistry, pharmacology, and therapeutic uses of sodium chloride will be found in Index Med.; J. Am. M. Assoc.; Chem. Abstr.; Zentralbl. Biochem. u. Biophysik; and Chem. Centralbl.

SODII CITRAS.

Robertson and Burnett report a study on the action of sodium citrate upon mammalia, with especial reference to acquired tolerance and to its action upon the cerebellum.—J. Pharmacol. & Exper. Therap. 1911-12, v. 3, pp. 635-648.

Variot (Gaz. hop. Oct. 22, 1910) recommends sodium citrate in the vomiting of nursing infants.—Répert. pharm. 1911, v. 23, p. 164. See also J. Pharm. et Chim. 1911, v. 3, p. 77, and N. York M. J. 1911, v. 93, p. 1198.

SODIUM GLYCEROPHOSPHATE.

Poulenc, Camille, reports a suggested correction in the statement as to the assay of sodium glycerophosphate.—*J. Pharm. et Chim.* 1911, v. 4, p. 544.

E'Ve, Geo. E., reports that of 10 lots of 75 per cent sodium glycerophosphate examined, only 1 contained the claimed amount of $\text{Na}_2\text{C}_2\text{H}_3\text{PO}_6 + \text{H}_2\text{O}$. The others ranged from 66.83 per cent to 72.8 per cent.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 130.

SODII HYDROXIDUM.

White, Edmund, discussing the properties of sodium hydroxide, enumerates some of the tests and points out that crude caustic soda in the form of lumps can be purchased of varying degrees of purity and the ordinary stick soda of commerce is fairly clean, and contains 85–90 per cent NaOH . Caustic soda made by the action of metallic sodium and water is very pure when carefully prepared, and contains usually over 95 per cent NaOH .—*Pharm. J.* 1911, v. 86, p. 414.

Braunschild and Chapiro (*Fr. Pat.* 431,232, Sept. 5, 1910) describe a process of manufacture of sodium or potassium hydroxide with simultaneous production of by-products.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 1381.

Heller, Isaac M., contributes a note on the use of sodium hydroxide for sterilizing instruments.—*J. Am. M. Assoc.* 1911, v. 57, p. 733.

SODII HYPOPHOSPHIS.

The Committee of Reference in Pharmacy (Third Report, p. 32) recommends that sodium hypophosphite should lose not more than 2 per cent of moisture when dried at 110° ; also that the lead test for phosphates and phosphites be deleted, "as it can not be commercially complied with." A limit for lead of 10 parts per million is proposed. See also *Pharm. J.* 1911, v. 87, p. 710.

The Biennial Report of the Inspection of Pharmacies notes that sodium hypophosphite is not always preserved under good conditions and is deliquesced.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 235, and *J. Pharm. Anvers*, 1911, v. 67, p. 523.

Firth and Myers discuss the action of sodium hypophosphite on copper sulphate in aqueous solution.—*J. Chem. Soc. Lond.* 1911, v. 99, pp. 1329–1333.

SODII IODIDUM.

Düsterbehn, F., in a review of the *Ph. Germ.* V, points out that sodium iodide is now described as a white powder that, at 100° , should not lose more than 5 per cent of moisture.—*Apoth.-Ztg.* 1911, v. 26, p. 233. See also *Chem. & Drug.* 1911, v. 78, p. 79.

The Committee of Reference in Pharmacy (Third Report, p. 32) suggests that the solubility of sodium iodide in water be stated as 1 in 0.6. The qualitative tests for iron, aluminium, calcium, magnesium, and ammonium should be deleted. See also Pharm. J. 1911, v. 87, p. 812.

Baxter and others report on the refractive power of halogen salts and on the changes in volume upon solution in water of sodium iodide.—J. Am. Chem. Soc. 1911, v. 33, pp. 901–922, 926.

Coblentz, Virgil, reports that prescriptions for solutions of sodium iodide, filled in various pharmacies in New York City, were found to contain from 15 to 16 per cent short and from 14 to 21 per cent in excess of the amount prescribed.—J. Ind. & Eng. Chem. 1911, v. 3, p. 540.

Smith, Kline & French Co. (Analytical Report, 1911, p. 41) reports that 2 of the 10 samples of sodium iodide examined were found to contain an excessive amount of alkali.

The Biennial Report of the Inspection of Pharmacies, 1909–10, states that sometimes the hydrated salt which is not officinal is found. Again, the anhydrous salt is poorly preserved and has absorbed a greater or less quantity of moisture.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 235. Also J. Pharm. Anvers, 1911, v. 67, p. 523.

Chistoni, Alfredo, reports an experimental research on the influence of sodium iodide on the elimination of purin compounds.—Arch. internat. pharmacod. et therap. 1911, v. 21, pp. 339–351.

Prochnow, Lucy, reports a study of the action of haloid salts of sodium on the smooth muscles of the walls of the uterus.—*Ibid.* pp. 287–312.

Hanzlik, Paul J., in a series of quantitative studies on the gastrointestinal absorption of drugs, reports observations on the absorption of sodium iodide.—J. Pharmacol. & Exper. Therap. 1911–12, v. 3, pp. 387–421.

SODII NITRAS.

An unsigned article (Montreal Pharm. J. 1911, v. 22, pp. 89–90) describes the nitrate beds of Chile and points out that the substance is seldom found pure. Last year 2,000,000 tons of nitrate were shipped from Chile, one-fifth of the output going to the United States and the rest to Europe.

Winslow, Alfred A., in a review of the outlook on the Chilean nitrate business, states that a number of new nitrate works have been opened, and that most of the well equipped plants have been running at full capacity.—J. Ind. & Eng. Chem. 1911, v. 3, p. 57.

Düsterbehn, F., in a review of the Ph. Germ. V, notes that a trace of iron is now permitted to be present.—Apoth.-Ztg. 1911, v. 26, 233.

White, Edmund, enumerates some of the tests for sodium nitrate.—Pharm. J. 1911, v. 86, p. 414.

SODII NITRIS.

Düsterbehn, F., in a review of the Ph. Germ. V, points out that the solubility of sodium nitrite is given as approximately 1:1.5. It is only slightly soluble in alcohol.—Apoth.-Ztg. 1911, v. 26, p. 233.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 582) points out that only qualitative tests are given.

The Committee of Reference in Pharmacy (Third Report, p. 32) suggests that the solubility of sodium nitrite in water, 1 in 1.5, be stated. The salt should be required to contain not more than 5 per cent of moisture, and not less than 95 per cent of sodium nitrite, NaNO_2 , as indicated by titration with potassium permanganate. See also Pharm. J. 1911, v. 87, p. 812.

White, Edmund, enumerates some of the tests and points out that this article is now prepared of a fair degree of purity on a very large scale for technical purposes. It is usually not quite colorless, and may contain as much as 95 per cent NaNO_2 , the chief impurities being nitrate, with traces of sulphate and chloride.—Pharm. J. 1911, v. 86, p. 414.

Rupp and Lehmann outline a new method for the estimation of nitrite in sodium nitrite, by the use of a bromate-bromide solution.—Arch. Pharm. 1911, v. 249, pp. 214–217.

Dey and Sen discuss the interaction of hydrazine sulphate on nitrites, and outline a method for estimating the nitrogen in nitrites.—Ztschr. anorg. Chem. 1911, v. 71, pp. 236–242.

Army, H. V., reports on 9 samples of sodium nitrite, 7 samples up to or over the U. S. P. requirement; 1 sample took only 20 cc. N/10 potassium permanganate V. S., while 1 sample turned out to be sodium nitrate.—Proc. Ohio Pharm. Assoc. 1911, p. 127.

SODIUM PERBORATE.

Fuhrmann, Franz H., discusses the production of perborates.—Chem. Ztg. 1911, v. 35, pp. 1022–1023, 1038–1039.

An unsigned note (Pharm. J. 1911, v. 87, p. 502) outlines a test to distinguish sodium perborate from sodium borate by the use of a solution of a bichromate.

Lenz and Richter discuss the determination of perboric acid and of similar combinations.—Ztschr. anal. Chem. 1911, v. 50, pp. 537–544.

Herzfeld, A., reports successful results with sodium perborate as a dressing in the treatment of diabetic gangrene.—J. Am. M. Assoc. 1911, v. 57, p. 1613.

SODII PHENOLSULPHONAS.

Smith, Kline & French Co. (Analytical Report, 1911, p. 42) reports that 2 of the 6 samples of sodium phenolsulphonate examined were rejected on account of their color.

SODII PHOSPHAS.

The Committee of Reference in Pharmacy (Third Report, p. 32) proposes that the solubility of sodium phosphate be corrected to 1 in 7. The salt should be required to contain not less than 99.5 per cent of sodium phosphate, $\text{Na}_2\text{HPO}_4 \cdot 12\text{H}_2\text{O}$, as indicated by the titration of 5 gm. of the salt dissolved in 50 cc. of water by volumetric solution of sulphuric acid, using methyl orange as indicator. It should yield no characteristic reaction with the tests for sulphates or chlorides. See also Pharm. J. 1911, v. 87, p. 812.

An unsigned review (Chem. & Drug. 1911, v. 78, p. 79) notes that the Ph. Germ. V directs that sodium phosphate be tested for the presence of arsenic by the Bettendorf test.

White, Edmund, enumerates some of the tests for sodium phosphate and points out that the article sold for medicinal purposes is of very fair purity and contains, as a rule, only traces of sulphates and chlorides.—Pharm. J. 1911, v. 86, p. 526.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 65) report examining a sample of acid sodium phosphate which was evidently 98 per cent $\text{Na}_2\text{HPO}_4 \cdot 10\text{H}_2\text{O}$ with 2 per cent $\text{NaH}_2\text{PO}_4 \cdot \text{H}_2\text{O}$.

SODII SALICYLAS.

Düsterbehn, F., in a review of the Ph. Germ. V points out that the solubility of sodium salicylate in water is given as 1:1.—Apoth.-Ztg. 1911, v. 26, p. 233.

The Committee of Reference in Pharmacy (Third Report, p. 32) suggests that the water of crystallization be deleted from the formula. Solubility in water should be stated as one in one, and a caution added as to the deposit of crystals on standing. No test for carbolates or sulphocarbolates is necessary. See also Pharm. J. 1911, v. 87, p. 812.

Hill, Charles Alex., contributes a note on the crystallization of sodium salicylate solution.—Pharm. J. 1911, v. 86, p. 451. See also pp. 517, 543, 574, and 643.

Emery, W. O., in the referee report on headache mixtures outlines a method for determining sodium salicylate.—Proc. Assoc. Off. Agric. Chem. 1911, 28th Ann. Conv. pp. 236–241 (Bull. Bur. Chem. U. S. Dept. Agric. 1912, No. 152).

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 65) report examining 16 samples of sodium salicylate, with a strength of 97 to 99.3 per cent anhydrous salt and a free acid content of 0.04 to 0.2 per cent.

Jones, Ernest R., reports that the minimum satisfactory test for sodium salicylate in milk is 1 part in 150,000.—Apothecary, June, 1911, v. 23, p. 16.

Waddell, J. A., reports a comparative investigation of the effects and toxicity of sodium salicylate of natural and synthetic origin. No differences were detected between the brands of natural and synthetic salicylate examined, although the synthetic samples were the cheapest obtainable on the market.—*Arch. Int. Med.* 1911, v. 8, pp. 784-805.

Waller, H. Ewan, discusses the influence of salicylates and kindred drugs on thyroid activity.—*Lancet*, 1911, v. 181, p. 756. See also editorial, p. 780.

Crouzel, Ed., discusses the employment of large doses of sodium salicylate and the difficulty of avoiding gastric disturbance. He submits a formula for a concentrated solution in milk with acacia for rectal injection.—*Répert. pharm.* 1911, v. 23, p. 289.

Lambert, Alexander, in a discussion on the use of salicylates in rheumatism, suggests the administration of sodium salicylate with large doses of sodium bicarbonate.—*Tr. Am. M. Assoc. Sec. Pharm. & Therap.* 1911, p. 85. Also *J. Am. M. Assoc.* 1911, v. 57, p. 898.

Stark, A. Campbell, discusses some clinical uses of sodium salicylate.—*Practitioner*, 1911, v. 86, pp. 401-412.

Diner, Jacob, states that the sickening taste of the salicylates can be counteracted by dissolving them in elixir of gentian or by the addition of a small quantity of tincture of gentian to the aqueous solution.—*Drug. Circ.* 1911, v. 55, p. 293.

Waucomont, in a report of the experimental work on the action of medicinal substances on the elimination of uric acid, concludes that sodium salicylate diminishes the elimination of uric acid and of xanthin compounds.—*Arch. internat. pharmacod. et therap.* 1911, v. 21, pp. 369-414.

An editorial note (*Critic and Guide*, 1911, v. 14, p. 187) states that quinsy may sometimes be aborted by the administration of 10-grain doses of sodium salicylate every hour.

Harvey, G. W., recommends that cases of quinsy, where there is threatened suppuration, be given small doses of the natural soda salicylate.—*Hahnemann. Month.* 1911, v. 46, p. 638.

An editorial (*Ellingwood's Therap.* 1911, v. 5, pp. 189-190) calls attention to some recent reports on the hypodermic use of the salicylates in rheumatism.

Additional references on the chemistry, pharmacology, and therapeutic uses of salicylates will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Zentralbl. Biochem. u. Biophysik*; and *Chem. Centrbl.*

SODII SULPHAS.

Sharp, Gordon, reviews the history of Glauber's salt and states that, as natron vitriolatum, sal catharticum Glauberi, or sal mirabile Glauberi, it was introduced in the year 1658.—*Drug Topics*, 1911, v. 26, pp. 53-56. See also *Pharm. J.* 1911, v. 86, p. 33.

Bowersox, Charles H., presents a brief note on the history of Glauber's salt.—*Western Druggist*, 1911, v. 33, p. 77.

Düsterbehn, F., in a review of the Ph. Germ. V, points out that dried sodium sulphate on heating should not lose more than 11.4 per cent of moisture, indicating a minimum content of 88.6 per cent of anhydrous sodium sulphate. The solubility in water at 15° is approximately 1:3.—*Apoth.-Ztg.* 1911, v. 26, p. 233.

See also *Pharm. J.* 1911, v. 86, p. 582, and *Chem. & Drug.* 1911, v. 78, p. 79.

White, Edmund, enumerates the tests for sodium sulphate and points out that, in the form of Glauber's salt, it finds very extensive use in medicine. The medicinal variety is usually fairly pure. The salt can also be purchased in light feathery crystals, and in acicular crystals resembling magnesium sulphate and known as "Mock Epsoms."—*Pharm. J.* 1911, v. 86, p. 526.

Whitney, D. V., reports on a sample of sodium sulphate purchased in bulk. The crystals were small, irregular, pale yellowish in color, with slight disagreeable odor of stale water; the solution showed insoluble particles of dirt and contained a trace of iron.—*Proc. Missouri Pharm. Assoc.* 1911, p. 96.

Smith, Kline & French Co. (Analytical Report, 1911, p. 42) reports that 1 of the 6 samples of sodium sulphate examined was rejected as containing an abnormal amount of ammonium salts.

Davis, J. (U. S. Pat. 990,116, Apr. 18, 1911), describes a process of dehydrating sodium sulphate crystals.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 620.

Weise, Paul, reports experimental observations on the nature of the resorption in the small intestine of hypertonic solutions of sodium sulphate and magnesium sulphate.—*Arch. internat. pharmacod. et therap.* 1911, v. 21, pp. 77-104.

Majumdar, P. C., states that, in the treatment of odontalgia, or toothache, natrum sulph is indicated when the toothache is better by holding cold water in the mouth. It is worse by hot water or any other hot drink in the mouth.—*Hahnemann. Month.* 1911, v. 46, p. 634.

SODII SULPHIS.

The Committee of Reference in Pharmacy (Third Report, p. 33) recommends that the percentage of sodium sulphite, $\text{Na}_2\text{SO}_3 \cdot 7\text{H}_2\text{O}$, required should be reduced to 94, and the titration figure corrected accordingly. A lead limit of 10 per million should be introduced. See also *Pharm. J.* 1911, v. 87, p. 812.

White, Edmund, gives the properties of sodium sulphite and outlines a method for quantitative determination. Owing to oxidation the commercial article rarely reaches the standard described and readily deteriorates if not carefully stored. The anhydrous sulphite

suffers considerable change to sulphate during the process of drying.—*Pharm. J.* 1911, v. 86, p. 526.

Army, H. V., reports on 13 samples of sodium sulphite; 2 samples were up to the U. S. P. requirement. The rest were above this requirement, and were, in short, samples of sodium bisulphite.—*Proc. Ohio Pharm. Assoc.* 1911, p. 126.

Smith, Kline & French Co. (Analytical Report, 1911, p. 42) reports that 2 of the 8 samples of sodium sulphite examined were slightly low in strength and contained a slightly excessive amount of heavy metals.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 66) point out that the best grades contain 90 to 97 per cent hydrous salt; second grades, 81 to 83 per cent. The estimation of water is a difficult operation.

SODII THIOSULPHAS.

Düsterbehn, F., in a review of the *Ph. Germ. V.*, notes that the solubility of sodium thiosulphate in water is now given as 1:1.—*Apoth.-Ztg.* 1911, v. 26, p. 233.

White, Edmund, enumerates some of the tests for sodium thiosulphate and points out that the commercial article is met with in many varieties, but the pea crystals are the most convenient form for general use. It is usually of very satisfactory purity.—*Pharm. J.* 1911, v. 86, p. 414.

Whitney, D. V., reports on 3 samples of sodium thiosulphate; 1 contained traces of iron, 1 showed considerable sulphide, and the third, marked C. P., showed traces of sulphide but no heavy metals.—*Proc. Missouri Pharm. Assoc.* 1911, p. 97.

Smith, Kline & French Co. (Analytical Report, 1911, p. 42) reports that 5 samples of sodium thiosulphate were examined and one was rejected on account of being excessively alkaline. See also *Proc. Pennsylvania Pharm. Assoc.* 1911, p. 130, and *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 348.

SPARTEINÆ SULPHAS.

Moureu and Valeur present a series of papers on sparteine and isosparteine.—*Bull. Soc. chim. France*, 1911, v. 9, pp. 468-479.

Jorissen, A., presents a characteristic reaction for sparteine.—*J. Pharm. et Chim.* 1911, v. 4, p. 251. Also *Ann. chim. analyt.* 1911, v. 16, p. 412.

The Editor of the "Therapeutics" column (*J. Am. M. Assoc.* 1911, v. 56, p. 966) asserts that the evidence of investigators and clinicians in regard to the action of sparteine is so conflicting that it must be concluded that the actual action and utility of this drug is not established. There is no good therapeutic reason for recognizing this drug in the revised *Pharmacopœia*.

SPIGELIA.

Lloyd, John Uri, states that the American Indian employed a decoction of spigelia as a vermifuge. It was described by Barton, Schöpf, and others, but was never extensively used by the American schools of medicine.—Bull. Lloyd Libr. 1911, No. 18, pp. 82–83.

True, R. H., reports that it is possible to grow spigelia under shade, but at the present time the price of the drug will not warrant the necessary expenditure.—Proc. N. W. D. A. 1911, p. 168.

Lilly, J. K., reports that it is difficult to obtain spigelia free from wrong species and strange rhizomes; the most careful botanical inspection is necessary here.—Proc. N. W. D. A. 1911, p. 159.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for 3 samples of spigelia: Water content, 6.42 to 10.46 per cent; ash content, 18.72 to 40.81 per cent; alkalinity of water soluble ash, 0.21 to 1.2 per cent; total alkalinity of ash, 3.31 to 24.51 per cent.—Proc. Ohio Pharm. Assoc. 1911, p. 70.

Schneider, Albert, states that spigelia is very extensively adulterated with *Ruellia ciliosa*, which has bast cells and abundant sclerenchyma cells and cystoliths.—Merck's Rep. 1911, v. 20, p. 3.

Jaffa, M. E., reports on a sample of "Pink root" consisting largely of ruellia.—Bull. California Bd. Health, 1911, v. 7, p. 33.

Kraemer, Henry, describes and illustrates the structural characteristics of the rhizome of *Phlox carolina*.—Drug. Circ. 1911, v. 55, pp. 68–70.

Smith, Kline & French Co. (Analytical Report, 1911, p. 42) reports that of 20 samples of spigelia examined only 1 lot contained considerable quantities of *Ruellia ciliosa*, but another plant, probably *Phlox*, was the more common extraneous plant present. In 1 sample they did not find a single rhizome or root having the microscopical structure of *Spigelia marilandica*. See also Proc. Pennsylvania Pharm. Assoc. 1911, p. 130, and Bull. Am. Pharm. Assoc. 1911, v. 6, p. 348.

Notice of Judgment No. 901, under the food and drugs act, deals with the adulteration and misbranding of spigelia.

The editor of the "Therapeutics" column (J. Am. M. Assoc. 1911, v. 56, p. 815) thinks that the only therapeutic use for spigelia is to promote the removal from the intestine of the roundworm, and occasionally to aid in the removal from the rectum of the pinworm.

SPIRITUS.

Roderfeld, A., reviews the spirits of the Ph. Germ. V and calls attention to several changes that have been embodied in the formulas for these preparations.—Apoth.-Ztg. 1911, v. 26, p. 290.

Hiltner, E. S., presents a note on a tentative method for the determination of essential oil in alcoholic solutions.—Proc. Assoc. Off.

Agric. Chem. 1911, 28th Ann. Conv. pp. 195-196 (Bull. Bur. Chem. U. S. Dept. Agric. 1912, No. 152).

SPIRITUS ÆTHERIS.

The Committee of Reference in Pharmacy (Third Report, p. 32) suggests that as this will now be made with ether of specific gravity 0.720, the specific gravity must be corrected. See also Pharm. J. 1911, v. 87, p. 812.

SPIRITUS ÆTHERIS COMPOSITUS.

The Committee of Reference in Pharmacy (Third Report, p. 33) has been unable to devise any rational formula for the production of compound spirit of ether, and strongly recommends that the preparation be deleted from the British Pharmacopœia. The extreme waste of alcohol involved in following the official directions for making this preparation has led to the universal substitution of a factitious preparation for the official. See also Pharm. J. 1911, v. 87, p. 812.

Ford, Charles M., states that few drug stores are prepared to furnish the official article of Hoffmann's anodyne, and the jobbers as a rule do not carry the true ethereal oil for preparing it.—Drug. Circ. 1911, v. 55, p. 626.

Murphy, Thos. W., is informed that many druggists make Hoffmann's anodyne without any ethereal oil whatever, probably in deference to the taste of the foreigner who buys it for drinking purposes.—Bull. Pharm. 1911, v. 25, p. 81.

The editor of the "Therapeutics" column (J. Am. M. Assoc. 1911, v. 57, p. 1539) asserts that Hoffmann's anodyne has no special sedative effects. If alcohol is desired, whisky or brandy should be used.

SPIRITUS ÆTHERIS NITROSI.

The Committee of Reference in Pharmacy (Third Report, Suppl., p. 2) considers that, in view of the rapidity with which the percentage of ethyl nitrite in spirit of nitrous ether diminishes, 1 volume should be required to yield not more than 7 nor less than 4 volumes of nitric oxide gas, corresponding to not more than 2.65 nor less than 1.51 per cent by weight of ethyl nitrite. See also Pharm. J. 1911, v. 87, p. 812.

Nish, F. W., discusses the making and the assay of spirit of nitrous ether.—Pacific Pharm. 1911, v. 5, pp. 303-305.

An editorial note (Chem. & Drug. Australas. 1911, v. 26, p. 264) states that it is practically impossible to preserve spirits of nitrous ether in Australia in anything like the strength demanded by the

Ph. Brit. But the remarkable thing is that "spirits of nitre" kept under unfavorable circumstances nevertheless produces strong medicinal effect.

Bartlett, C. S., comments on the manufacture and the assay of spirit of nitrous ether and points out that the assay is a comparatively simple procedure and should preclude the sale of substandard preparations.—*Proc. Maine Pharm. Assoc.* 1911, pp. 50-52.

Herting, Otto, outlines a simple method for the valuation of spirit of nitrous ether.—*Pharm. Ztg.* 1911, v. 56, p. 423.

Dietze, F., comments on the article by Herting and claims that practically the same method was published by him in 1897 (*Am. J. Pharm.* 1898) and was then widely commented on.—*Ibid.* pp. 444-445.

Brown, Linwood A., reports some observations on the keeping of sweet spirit of nitre, and presents a suggestion for a change in the formula. He proposes to use absolute alcohol U. S. P. in place of that now in use, to keep the product at a temperature not greater than 10°, and in as small a container as possible.—*Am. Druggist*, 1911, v. 59, pp. 215-216.

Shannon, F. L., reports an experiment to determine the keeping quality of spirit of nitrous ether. When first assayed, September 2, it contained 4.26 per cent of ethyl nitrite. On December 21 it was found to contain 3.36 per cent; on March 2 of the following year, 2.71 per cent; and on June 5, 1.82 per cent. This demonstrates that this preparation loses approximately 1 per cent of ethyl nitrite every three months.—*Proc. Michigan Pharm. Assoc.* 1911, p. 109.

Dott, D. B., in a note on spirit of nitrous ether, points out that while the Ph. Brit. permits a variation in strength of from 2.6 to 1.75 per cent of ethyl nitrite, many preparations examined did not comply with the minimum requirement. He suggests that this preparation be not kept in stock but be made extemporaneously when wanted.—*Year-Book of Pharmacy*, 1911, pp. 422-423. See also *Pharm. J.* 1911, v. 87, pp. 173, 223, and *Chem. & Drug.* 1911, v. 79, p. 215.

An editorial (*Chem. & Drug.* 1911, v. 78, p. 17) discusses the decomposition of sweet spirit of niter, especially in the light of a recent decision by a magistrate that evaporation is not decomposition.

Riptoe, J. R., thinks that the ninth revision of the Pharmacopœia should caution against the use of glass stoppered bottles and the text which reads "well stoppered" should be changed to read "cork stoppered."—*Am. Druggist*, 1911, v. 59, p. 307.

Cook, Alfred N., states that some of the spirit of nitrous ether examined has no doubt deteriorated on the shelves. He advises druggists not to keep it too long and when it gets old throw it out.—*Bull. South Dakota Food & Drug Dept.* 1911, No. 23, p. 2.

Gaze, R., reports examining a sample of spirit of nitrous ether that was colored brown on mixing with sulphuric acid.—*Apoth.-Ztg.* 1911, v. 26, p. 689.

Diekman, George C., points out that as only a very few druggists make spirit of nitrous ether, the formula for its manufacture should be omitted.—*Proc. New York Pharm. Assoc.* 1911, p. 80.

Raubenheimer, Otto, asserts that few pharmacists are using the U. S. P. formula for spirit of nitrous ether. He recommends including a concentrated spirit of nitre of a certain strength, that can be kept in hermetically sealed tubes.—*Ibid.* p. 94.

Ramsaur, D. W., discussing the reason why some of our preparations are unreliable, advises the purchase of concentrated ethyl nitrite in sealed tubes and the making of the spirit extemporaneously by the addition of alcohol.—*Proc. Florida Pharm. Assoc.* 1911, p. 16.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, pp. 42–44) report a series of experiments to determine the cause of loss of ethyl nitrite on keeping the official spirit. They believe that their experiments show that the loss by hydrolysis in the spirit of the official alcoholic strength is, practically speaking, nil during a period of ten months and that while quantities of water produce an appreciable effect, that effect is very small and inconsiderable in comparison with the loss by volatilization if the spirit is exposed to air.

An editorial (*Chem. & Drug.* 1911, v. 79, p. 51) questions the wisdom of the recommendation made by the Chemists' Defence Association for the reduction in strength of spirit of nitre, because reduction of strength takes place in alcoholic solutions of ethyl nitrite much weaker than the Ph. Brit. spirit, and, whatever strength is fixed officially, there will be cases in which sales under that strength will occur. See also pp. 510, 522, 537, 559.

Coblentz, Virgil, asserts that since our manufacturers provide especially for the quick dispensing of full strength spirit of nitrous ether, there can be no excuse for dispensing preparations containing only 0.3, 2.2, and 2.5 per cent.—*Pract. Drug.* 1911, v. 29, Apr., p. 29.

Cowley, R. C., presents a brief note on the decomposition of sweet spirit of nitre in aqueous and alcoholic solutions.—*Chem. & Drug.* 1911, v. 78, p. 556.

Enz, K., reports a study of a number of samples of spirit of nitrous ether and presents his results in the form of a table.—*Apoth.-Ztg.* 1911, v. 26, pp. 717–719.

Brown, Linwood A., reports sweet spirit of niter anywhere from zero up to 100 per cent U. S. P. strength.—*Proc. Kentucky Pharm. Assoc.* 1911, p. 99.

Notice of Judgment No. 1063, under the food and drugs act, deals with the adulteration and misbranding of spirit of nitrous ether.

Table showing some of the analytical results reported for spirit of nitrous ether.

Reporters.	Number of samples.		References.
	Examined.	Rejected.	
A news note.....	2	2	Brit. Food J. 1911, v. 13, pp. 58-60.
Army, H. V.....	14	11	Proc. Ohio Pharm. Assoc. 1911, p. 126.
Coblenz, Virgil.....	5	5	J. Ind. & Eng. Chem. 1911, v. 3, p. 540.
Dunlap, Renick W.....	2	1	Rep. Ohio Dairy & Food Com. 1910-11, p. 48.
Jaffa, M. E.....	2	2	Bull. California Bd. Health, 1911, v. 6, p. 491.
Halverson, J. O.....	5	3	Ann. Rep. Food & Drug Com. Missouri, 1911, p. 14. Also Bull. Dept. Food & Drug Insp. Missouri, 1911, Nos. 10, 11, and 12, p. 2.
Lewis, Peyton S.....	10	8	Proc. Virginia Pharm. Assoc. 1911, pp. 90-102.
Lythgoe, Hermann C.....	6	6	Rep. Massachusetts Bd. Health, 1911, pp. 440, 443.
Mass. Bd. Health.....	1	1	Monthly Bulletin, 1911, p. 303.
Porter, C. S.....	33	20	Am. Druggist, 1911, v. 50, p. 42.
Rose, E. E.....	13	13	Bull. Florida Agric. Dept. 1911, v. 21, pp. 126-128.
Sayre, L. E.....	1	1	Bull. Kansas Bd. Health, 1911, v. 7, p. 176.
Street, John Phillips.....	34	30	Rep. Connecticut Agric. Exper. Sta. 1911, p. 215. See also pp. 181-183.

Robinson, Beverley, states that the best and safest agents to abort a cold are aromatic spirit of ammonia and sweet spirit of niter.—Critic and Guide, 1911, v. 14, p. 338.

Smith, Eustace, in his remarks on the choice of a diuretic, recommends the combination of the saline diuretics with the spirit of nitrous ether which, on account of the ethyl nitrite, is a useful agent in causing dilatation of the afferent vessels of the kidneys.—Brit. M. J. 1911, v. 1, pp. 289-292.

SPIRITUS AMMONIÆ.

Raubenheimer, Otto, states that spirit of ammonia can be made extemporaneously by diluting the stronger water of ammonia with alcohol.—Proc. New York Pharm. Assoc. 1911, p. 155.

Weinstein, Joseph, reports that 15 samples of spirit of ammonia were collected. In three stores sale was refused. Eleven were spiritus ammoniæ aromaticus, and four aqua ammoniæ.—1911, p. 150.

SPIRITUS AMMONIÆ AROMATICUS.

The Committee of Reference in Pharmacy (Third Report, p. 33) asserts that the barium chloride test for aromatic spirit of ammonia is unsatisfactory and recommends that ammonium chloride be added before the barium chloride. See also Pharm. J. 1911, v. 87, p. 812.

Gadd, H. Wippell, points out an apparent error in the third report of the Committee of Reference in Pharmacy with reference to the barium chloride test, and notes that Bird showed that 21 cc. should be taken instead of 20.—Chem. & Drug. 1911, v. 79, p. 559.

Egan, Thos. A., outlines a modified formula for aromatic spirit of ammonia. Using ingredients that are strictly U. S. P. quality, he dissolves the oils in one-half the quantity of alcohol and places this solution in a refrigerator for 48 hours to blend.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 290.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 8) point out that the proportion of ammonium carbonate in this preparation can vary from 2.71 to 2.856 per cent, but that the Ph. Brit. barium test requires as a rule 3 per cent or more.

Porter, C. S., reports examining 50 samples of aromatic spirit of ammonia, 46 of which were not of U. S. P. standard.—*Am. Druggist*, 1911, v. 59, p. 42.

SPIRITUS FRUMENTI.

An editorial (*Chem. & Drug*. 1911, v. 78, p. 576) discusses the origin and significance of the word "Usquebagh." See also Xrayser II, p. 607, and George Vogt, p. 644.

A quotation from the *Canadian Gazette* states that whisky is spirit obtained by distillation from a mash of cereal grains, saccharified by the diastase of malt, and contains not less than 42.75 per cent of absolute alcohol by volume, equivalent to 75 per cent by volume of proof spirits, except as provided in section 14.—*Montreal Pharm. J.* 1911, v. 22, p. 50.

Rusby, H. H., states that some years ago the board of trade of one of our large cities arranged a dinner at which not one of the articles served was to be genuine. The whisky was one of the vile concoctions which have been legalized during the present administration.—*Midl. Drug*. 1911, v. 45, p. 400.

Juckenack, A., discusses the valuation of whisky and other distilled spirits.—*Ztschr. Unters. Nahr. u. Genussm.* 1911, v. 22, pp. 47-54. See also *Chem. Ztg.* 1911, v. 35, pp. 623-625, and *Pharm. Ztg.* 1911, v. 56, pp. 504-505.

v. Buchka asserts that many of the commercial whiskies are low in alcohol content.—*Chem. Ztg.* 1911, v. 35, p. 623. See also *Ztschr. Unters. Nahr. u. Genussm.* 1911, v. 22, pp. 34-43.

Adams, A. B., discusses the detection of substitution of spirits for aged whisky and presents a review of the chemical data presented in the trial of the United States v. Nine Barrels of Whisky.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 647-655.

Mansfeld, M., in a report included in the "Jahresbericht über die Tätigkeit der Untersuchungsanstalt für Nahrungs- und Genussmittel des Allgem. österr. Apotheker-Vereines," presents a table showing results of analyses of a number of samples of whisky.—*Ztschr. allg. österr. Apoth.-Ver.* 1911, v. 49, p. 514.

Rocques, X., discusses the analysis of whisky in a particular case in which samples of but small volume are available.—*Ann. falsif.* 1911, v. 4, p. 641.

Jewell, John F., reports that whisky imported into Australia on and after January 1, 1912, must bear an excise certificate guaranteeing that it has been for two years maturing in wood.—*Cons. & Tr. Rep.* Sept. 27, 1911, p. 1445.

Notice of Judgment No. 1111, under the food and drugs act, deals with the adulteration and misbranding of whisky.

SPIRITUS GLYCERYLIS NITRATIS.

Göppner, C., discusses the production and yield of nitroglycerin.—*Chem. Ind.* 1911, v. 34, pp. 307-309.

Hofwimmer, Franz, discusses the influence of the relation of glycerin to the nitrating acids on the yield in the manufacture of nitroglycerin.—*Chem. Ztg.* 1911, pp. 1229-1230.

The Committee of Reference in Pharmacy (Third Report, p. 8) recommends liquor glonoini as a synonym for liquor trinitrini, and the use of the term glyceryl trinitrate for trinitroglycerin. See also *Pharm. J.* 1911, v. 87, p. 590.

Murray, A. G., presents a note on the assay of nitroglycerin tablets, and discusses the several methods proposed for the determination of nitroglycerin.—*Proc. Assoc. Off. Agric. Chem.* 1911, 28th Ann. Conv., pp. 248-250 (*Bull. Bur. Chem. U. S. Dept. Agric.* 1912, No. 152).

Scoville, Wilbur L., discusses the estimation of minute quantities of nitroglycerin.—*Am. J. Pharm.* 1911, v. 83, pp. 359-364.

Bernegau, L. H., reports that 1 sample of 10 per cent solution of nitroglycerin assayed only 9.4 per cent glyceryl trinitrate, though labeled 10 per cent.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 125.

Riedel's *Berichte* (1911, p. 97) quotes Samuel R. Ward, who believes that nitroglycerin can be used advantageously in the treatment of œdema of the lungs.

An unsigned abstract (N. A. J. H.) states that glonoine is the remedy for headache alternating with oppression in the chest.—*J. Am. Inst. Homœop.* 1911, v. 3, p. 161.

SPIRITUS MYRCLE N. F.

Gordon, Frederick T., presents some observations on real bay rum and a working formula for an imitation of this article.—*Drug. Circ.* 1911, v. 55, p. 184.

Dunlap, Renick W., reports that of 11 samples of bay rum examined, 10 were not passed.—*Rep. Ohio Dairy & Food Com.* 1910, p. 47.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, p. 22) report that the few parcels of bay oil of West Indian origin which were offered were mostly of very dubious quality.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 12) report on 6 samples of bay oil the specific gravity of which ranged from 0.9651 to 0.9842, the optical rotation from -0.24° to -2.2° , refractive index from 1.5137 to 1.5187, and phenol content from 38.6 to 64.0. They add that those with the unusually high phenol value contain probably added eugenol. See also p. 76.

Southall Bros. & Barclay (Rep, 1911, Birmingham, 1912, p. 23) report that 4 samples of bay oil have been examined during the year, and whilst all were of satisfactory quality, considerable variation in phenol content was found: Specific gravity, 0.9685 to 0.9855; phenols, 55.7 to 69.7 per cent; refractive index, 1.5240 to 1.5202.

SPIRITUS VINI GALLICI.

A quotation from the Canadian Gazette states that brandy is a spirit obtained by the distillation of wine, and contains not less than 42.7 per cent of absolute alcohol by volume; equivalent to 75 per cent by volume of proof spirits, except as provided in section 14.—Montreal Pharm. J. 1911, v. 22, p. 50.

Jukenack, A., discusses the leading principles for differentiating between cognac and other alcoholic beverages.—Chem. Ztg. 1911, v. 35, pp. 623–625. See also Ztschr. Unters. Nahr. u. Genussm. 1911, v. 22, pp. 47–54, and Pharm. Ztg. 1911, v. 56, pp. 504–505.

v. Buchka, K., in a discussion on the alcohol content of cognac and other distilled spirits, reports that it has been found to vary considerably.—Ztschr. Unters. Nahr. u. Genussm. 1911, v. 22, pp. 34–43.

Herzog, Eduard, discusses the detection of fusel oil in alcoholic beverages.—*Ibid.* v. 21, pp. 280–282.

Bonis presents a study of certain substances intended to give artificially to brandies certain qualities of bouquet which they do not possess naturally.—Ann. falsif. 1911, v. 4, pp. 461–467.

The Governor of Australia (Commonwealth of Australia Gaz. Oct. 7, 1911) has proclaimed the prohibition of the importation of imitation brandy from January 1, 1912. This prohibition applies to the following spirits: All spirits not being brandy distilled wholly from grape wine, which are described as eau de vie, cognac, or by any other name or description usually applied to brandy; and all spirits not being brandy distilled wholly from grape wine, which are colored and flavored so as to resemble brandy or so as to be likely to pass for brandy.—Cons. & Tr. Rep. Dec. 23, 1911, p. 1514.

Haas and Freyer (Arch. Chem. Mikros., v. 3, pp. 48–60) defines what is meant by "French brandy," and genuine or original French brandy, with 12 analyses of such brandies.—Chem. Abstr. 1911, v. 5, p. 960.

An unsigned article (Veröffentl. Kais. Gesundh. 35, 288) calls attention to the order of the Austrian Minister of the Interior on pharma-

ceutically prepared French brandies. Galenical French brandies are understood to be French brandies with the addition of medicinal agents, which must be the official preparations of the Ph. Austr.—Chem. Abstr. 1911, v. 5, p. 2145.

STAPHISAGRIA.

Lloyd, John Uri, states that staphisagria was known to the ancients, the powdered seeds being used for destroying vermin of the head and body, in which direction it is still popular.—Bull. Lloyd Libr. 1911, No. 18, p. 83.

Mitlacher, Wilhelm, reports that *Delphinium staphisagria* is readily cultivated and yields satisfactory results.—Pharm. Post, 1911, v. 44, p. 214.

The Committee of Reference in Pharmacy (Third Report, p. 33) proposes that the size of staphisagria seed, 5 to 7 mm. long, be given. An ash limit is considered unnecessary.—See also Pharm. J. 1911, v. 87, p. 812.

Majumdar, P. C., states that, in the treatment of odontalgia, or toothache, staphysagria is indicated by a decayed black and hollow tooth.—Hahnemann. Month. 1911, v. 46, p. 634.

Hood, Valney A., states that the indications for staphisagria are ailments from indignation with vexation, restrained displeasure, great weakness and relaxation of all organs, mind can not throw off trouble.—*Ibid.* p. 720.

Harvey, G. W., states that when a patient comes with nonmalignant papilloma studding the eyelid, singly or in numbers, we give him staphisagria in minute doses, knowing that the papilloma will certainly disappear if a few weeks' time be given it, without the use of either knife or cautery, to the patient's astonishment and our satisfaction.—*Ibid.* p. 637.

STILLINGIA.

Lloyd, John Uri, states that stillingia, in the form of an infusion or decoction of the green drug, has been used in domestic medicine as a purgative and alterative, creeping thence to the attention of physicians of the Southern States.—Bull. Lloyd Libr. 1911, No. 18, p. 83. See also Eclectic Med. Glean. 1911, v. 7, pp. 412–413.

Holm, Theo., describes and illustrates *Stillingia sylvatica* L. He also presents illustrations of the microscopical structure of the root, the branch, and the leaf.—Merck's Rep. 1911, v. 20, pp. 36–38.

Lilly, J. K., reports that there is some evidence that stillingia loses its therapeutic value rapidly upon drying and becomes inactive within a year from time of collection. To determine the correctness of this surmise would require years of elaborate study and may or may not be done within our lifetime. The point this is intended to illustrate is

that a correct standard cannot be hoped for until our knowledge of the particular drug has reached the point of reasonable completeness.—Proc. N. W. D. A. 1911, p. 159.

STRAMONIUM.

Lloyd, John Uri, states that stramonium was found in America by the settlers, who used it as a pot herb, the resulting deaths so advertising it as to create the common name still in use: Jimson or Jamestown weed.—Bull. Lloyd. Libr. 1911, No. 18, p. 84.

Henkel, Alice, describes and illustrates jimson weed, *Datura stramonium* L.; also gives synonyms, other common names, the habitat and range, and data on the collection, prices, and uses.—Bull. Bur. Plant. Ind. U. S. Dept. Agric. 1911, No. 219, p. 30.

Mitlacher, Wilhelm, reports his experiments in the cultivation of stramonium.—Pharm. Post, 1911, v. 44, pp. 213–214. See also pp. 507–509, 515–518.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 653) points out that an ash limit of 20 per cent is introduced for the powder.

The Committee of Reference in Pharmacy (Third Report, p. 33) proposes the addition of a description of the microscopical characters of stramonium leaves. See also Pharm. J. 1911, v. 87, p. 810.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 115–116) present a table showing the requirements for this drug included in several pharmacopœias.

Rusby, H. H., thinks the definition should say "leaves, and tops not exceeding 6 inches in length, flowers and fruits being often attached."—Pharm. Era, 1911, v. 44, p. 95.

Schneider, Albert, outlines the histology of stramonium and states that the drug is often of poor quality and often contains an excess of refuse, dirt, sand, etc.—Merck's Rep. 1911, v. 20, p. 3.

Rosenthaler, L., describes and illustrates the nature of the material obtained from stramonium leaves by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, p. 530.

Andrews, Albert Edward, reports on the active constituents of the Indian solanaceous plants, *Datura stramonium*, *D. fastuosa*, and *D. metel*. His results show that Indian *D. stramonium* bears favorable comparison with the European and Egyptian plants as regards the amount of total alkaloid it contains.—J. Chem. Soc. Lond. 1911, v. 99, pp. 1871–1877. See also Bull. Imp. Inst. 1911, v. 9, pp. 110–113.

Bowman, F. B. (Bull. Manila Med. Soc. January) reports a case of poisoning from *Datura alba* seeds in the person of one of the chemists in the Bureau of Science of Manila, who probably took in all 5 mg. of the alkaloid.—J. Am. M. Assoc. 1911, v. 56, p. 1001.

Vanderkleed, Chas. E., reports 1 assay of stramonium leaf which yielded 0.330 per cent mydriatic alkaloids.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

Ferguson, George A., reports on 1 sample of stramonium containing 0.321 per cent mydriatic alkaloids.—Proc. New York Pharm. Assoc. 1911, p. 153.

Smith, Kline & French Co. (Analytical Report, 1911, p. 42) report that 15 lots of stramonium were received and assayed. The total mydriatic alkaloids found were from 0.22 to 0.37 per cent.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 19) report that 2 batches of the powder of stramonium leaves yielded 21.7 and 27.6 per cent of ash.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 33–34) report that ordinarily stramonium varies from 0.14 to 0.20 per cent of mydriatic alkaloids. A select drug can be obtained with an average of from 0.30 to 0.35 per cent of mydriatic alkaloids.

Royal, George, gives stramonium for complete suppression or when only a few drops are secreted and dribble from the bladder. He finds it most frequently indicated in typhoid or other low fevers, and when we have delayed or suppressed eruption of the exanthemata.—Hahnemann. Month. 1911, v. 46, p. 556.

Stambach, H. L., prescribes stramonium for incessant and incoherent talking and laughing; praying, beseeching, and entreating; desires light and company; imagines that she is double or lying crosswise.—*Ibid.* p. 476.

STRONTII BROMIDUM.

Coblentz, Virgil, reports that prescriptions for solutions of strontium bromide, filled in various pharmacies in New York City, were found to contain from 20 per cent short to 298 per cent in excess.—J. Ind. & Eng. Chem. 1911, v. 3, p. 540.

Barthe, L. (Bull. Soc. Pharm. Bordeaux, 1911, p. 251), discusses the estimation of strontium in the strontium salts of the Ph. Fr. V.—Bull. pharm. Sud-Est, 1911, v. 16, p. 516.

STROPHANTHINUM.

Hale, Worth, reports some observations on the effect of the digestive secretions on the activity of strophanthin. He points out that the acid of the gastric secretion causes some diminution in the action of strophanthin, but no exact determination of the degree of decomposition can be made.—Tr. Am. M. Assoc. Sec. Pharm. & Therap. 1911, p. 206.

Hoover, C. G., asserts that 0.001 gm. of strophanthin is the equivalent of 3 drachms of digitalis, and yet one would not give it in 3-drachm doses. Strophanthin is not indicated in all kinds of circulatory dis-

ease, but the single indication is myocardial insufficiency.—*J. Am. M. Assoc.* 1911, v. 56, p. 1749.

Wilbur, Ray Lyman, discusses the relations of the nervous mechanism of the heart to drug effects, as indicated by experiments on the terrapin, and concludes that strophanthin acts largely on the nervous mechanism of the heart, perhaps partly through its stimulation of the sensory nerve endings of the endocardium.—*Tr. Am. M. Assoc. Sec. Pharm. & Therap.* 1911, pp. 237–257.

Catillon opposes the dictum of Chevalier, that the fixation of toxicity is without value, and contends as a result of a large number of experiments that the precise toxic dose, for a given weight of the animal in a specified time, furnishes a scientific indication of the degree of activity of the product because it accords with chemical analysis.—*J. Pharm. et Chim.* 1911, v. 3, p. 317.

Berti, Antonio, presents a communication, with tracings, on the action of strophanthin on the heart.—*Archiv. farmacol. Sper.* 1911, v. 11, pp. 167–174.

Danielopolu, D., asserts that the toxicity of strophanthin (especially Boehringer's strophanthin and Gehe's crystalline strophanthin) is much attenuated by an exposure to the ultra-violet rays varying between 30 minutes and 2.5 hours.—*Compt. rend. Soc. Biol.* 1911, v. 71, p. 200.

An editorial (*Merck's Arch.* 1911, v. 13, p. 29) presents some comments on the action of strophanthin upon the circulation.

Gottlieb, R., in a discussion on some digitalis questions, comments on the action of digitalis bodies on the walls of the blood vessels and on the systolic and diastolic heart action of strophanthin.—*Therap. Monatsh.* 1911, v. 25, pp. 9–11.

van Zwalewenburg, James G., reports a case of partial heart block following the injection of 0.001 gm. of strophanthin.—*Arch. Int. Med.* 1911, v. 8, pp. 141–149.

Hernando discusses the influence of strophanthin on the blood pressure of rabbits and gives his results in the form of tables.—*Arch. exper. Path. u. Pharmacol., Leipz.* 1911, v. 66, p. 119.

Young thinks strophanthidin a better preparation than strophanthin for medicinal use owing to greater stability.—*Pharm. J.* 1911, v. 86, p. 111.

Additional references on the chemistry, pharmacology, and therapeutic use of strophanthin will be found in *Index Med.*; *J. Am. M. Assoc.*; and *Zentralbl. Biochem. u. Biophysik.*

STROPHANTHUS.

Lloyd, John Uri, states that strophanthus, as a drug, came to the general notice of Europeans in the early sixties, because of its use as an arrow poison among the African native tribes.—*Bull. Lloyd Libr.* 1911, No. 18, pp. 84–85. See also *Bull. Pharm.* 1911, v. 25, p. 242.

Hartwich, C., points out that the Ph. Germ. V requires *strophanthus* to be derived from *Strophanthus kombé*. He also notes that the sulphuric acid test readily occurs with concentrated sulphuric acid. The dilution with water is not essential.—Apoth.-Ztg. 1911, v. 26, p. 94.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 61-64), in discussing the available supply of *strophanthus* seed, express regret that the Ph. Germ V did not include a physiological method for standardizing this drug.

The Committee of Reference in Pharmacy (Third Report, p. 34) proposes that the absence of more than occasional crystals of calcium oxalate in the seed coats be added to the description. Eighty per cent, instead of strong, sulphuric acid is recommended for the color test. The assay processes suggested are considered unreliable and none is recommended for adoption. See also Pharm. J. 1911, v. 87, p. 812.

Tunmann, O., states that, at the present time, only the *strophanthus* seed complying with the *strophanthin* reaction is being admitted into Germany.—Apoth.-Ztg. 1911, v. 26, p. 580.

Wood, H. C., Jr., reports that, as there is no satisfactory method of chemical standardization for any of the drugs of the *digitalis* group, the committee of the Philadelphia Branch of the American Pharmaceutical Association feels that the adoption of a physiologic method of assay for *strophanthus* would be advisable.—J. Am. M. Assoc. 1911, v. 56, p. 606.

Schneider, Albert, states that *strophanthus* is very frequently adulterated with spurious *strophanthus*.—Merck's Rep. 1911, v. 20, p. 3.

"D. B." reports that, according to W. Mitlacher, the Austrian inspection of pharmacies found *strophanthus* fruits mixed with analogous seeds, arising from confusion in their collection.—Bull. sc. pharmacol. 1911, v. 18, Annexes, p. 9.

Dohme and Engelhardt think there is no reason why *strophanthus* should not be assayed. A reliable process has been worked out.—Am. J. Pharm. 1911, v. 83, p. 525.

Smith, Kline & French Co. (Analytical Report, 1911, p. 58) reports on the physiological testing of *strophanthus*.

Coblentz, Virgil, reports that the physiological assays of such drugs as *digitalis* and *strophanthus*, dispensed in various pharmacies in New York City, demonstrated a very wide variation in their relative potency.—J. Ind. & Eng. Chem. 1911, v. 3, p. 540.

Caesar & Loretz (Jahres-Bericht, 1911, pp. 137-139) discuss the valuation of *strophanthus* seed and the methods of applying the several tests.

Gardner, Alexander, discusses the assay of *strophanthus* and tincture of *strophanthus*, and outlines the method employed by him.—Drug. Circ. 1911, v. 55, p. 403.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 68) report that 3 samples of strophanthus seeds examined by them answered the sulphuric acid test for the Kombé variety, and one contained 5.4 per cent of strophanthin.

Haycock, J., presents a note on strophanthus seeds: their assay by means of chemical methods; with suggestions for a new Ph. Brit. tincture of strophanthus.—Pharm. J. 1911, v. 86, p. 553. See also p. 111; and Brit. & Col. Drug. 1911, v. 59, p. 94.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 4) recommends, in approximate conformity with the International Agreement, that tincture of strophanthus be made with 10 per cent w/v of the seeds. It would then be four times as strong as at present. See also Pharm. J. 1911, v. 87, p. 847.

Smith, Kline & French Co. (Analytical Report, 1911, p. 44) reports that 2 lots of tincture of strophanthus were tested physiologically on frogs. The minimum fatal dose of the first sample was found to be 0.0002 cc. per gm. body weight of frog. The minimum fatal dose of the second sample was found to be 0.00007 cc. per gm. body weight of frog.

Thomas states that for dropsical conditions due to cardiac weakness, strophanthus is one of our best agents.—Eclectic M. J. 1911, v. 71, p. 100.

Downs, L. S., has found strophanthus a valuable remedy in most any heart lesion, either functional or structural, when there is irregularity with dyspnoea and weak pulse.—*Ibid.* p. 269.

The editor of the "Therapeutics" column (J. Am. M. Assoc. 1911, v. 56, pp. 591-593) discusses the pharmacology and therapy of strophanthus and of strophanthin.

STRYCHNINA.

Lloyd, Gordon, states that strychnine, the greatest of all stimulants, was given to the world in 1818 by Pelletier and Caventou.—Rocky Mountain Druggist, 1911, v. 25, March, p. 43.

Tunmann, O., notes that it is probably not generally well known that the greater quantity of strychnine imported into Germany comes from America, the annual importation varying from 140 kilos in 1899 to 220 kilos in 1909.—Apoth.-Ztg. 1911, v. 26, p. 580.

Joblin, Miller, reports that the imports of strychnine during the fiscal year 1909 amounted to 1,475 ounces, and in 1910 to 1,971 ounces.—Cons. & Tr. Rep., Oct. 20, 1911, p. 351.

The Committee of Reference in Pharmacy (Third Report, p. 34) recommends that the permanganate test be deleted, as it is unnecessary. See also Pharm. J. 1911, v. 87, p. 812.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 68) report that 2 samples of strychnine estimated volumetrically as

100.07 per cent; 1 of these was absolutely devoid of any brucine reaction.

The Committee of Reference in Pharmacy (Third Report, p. 34) recommends that the official formula for strychnine hydrochloride remain. The loss of moisture on drying at 110° should not exceed 8 per cent. See also *Pharm. J.* 1911, v. 87, p. 812.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 68) report that 1 sample of strychnine hydrochloride analyzed as follows: strychnine, 81.5 per cent; water, 8.0 per cent; and hydrochloric acid, 9.09 per cent

Dott, D. B., presents a note on arsenates of strychnine and a second note on strychnine hypophosphite.—*Year-Book of Pharmacy*, 1911, pp. 421-422. See also *Pharm. J.* 1911, v. 87, p. 173.

Kiczka, M., reviews the present status of our knowledge of the strychnos alkaloids.—*Pharm. Prax.* 1911, v. 10, pp. 252-254.

Sievers, A. F., presents a tabulated statement of the strychnine and brucine content of a number of species of *Strychnos*.—*Midl. Drug.* 1911, v. 45, pp. 233-236.

Fuller, H. C. (*J. Ind. & Eng. Chem.* v. 2, No. 9), discusses the separation and determination of cocaine and strychnine, and atropine and strychnine, when they occur together.—*Pharm. J.* 1911, v. 86, p. 807.

Denigès, G., discusses the theory and rational modification of Malaquin's reaction for the detection of strychnine.—*Bull. Soc. chim. France*, 1911, v. 9, pp. 537-542. See also *Bull. Soc. roy. pharm. Brux.* 1911, v. 55, pp. 136-142.

Kalal, F. J., reports on the use of apomorphine as an antidote in strychnine poisoning.—*Am. J. Clin. Med.* 1911, v. 18, p. 542.

Epstein, E. M., presents a review of a recent article on the tolerific property of strychnine.—*Ibid.* pp. 79-81.

Mostrom and McGuigan, in a report of studies on the convulsive reflex produced by strychnine, discuss the influence of habit.—*J. Pharmacol. & Exper. Therap.* 1911-12, v. 3, pp. 515-519.

They also report observations on the modification produced by epinephrine.—*Ibid.* pp. 521-530.

Owen and Sherrington report observations on strychnine reversal.—*J. Physiol. Lond.* 1911-12, v. 43, pp. 232-241.

Burnett, J. A., reports a case of fatal poisoning from strychnine, used by mistake as a snuff instead of cocaine.—*J. Am. M. Assoc.* 1911, v. 57, p. 1151. See also *Critic and Guide*, 1911, v. 14, p. 378.

An editorial (*Eclectic Med. Glean.* 1911, v. 7, pp. 258-259) states that in Eclectic medicine strychnine salts are used chiefly in disorders involving the nervous system, the heart, the bladder, and the reproductive tract. Salts of strychnine are decidedly stimulant and tonic, and so well do they fulfill their indications that there is little question as to their position in the therapy of any of the schools of medicine.

Additional references on the chemistry and pharmacology of strychnine will be found in Index Med.; J. Am. M. Assoc.; and Zentralbl. Biochem. u. Biophysik.

STRYCHNINÆ NITRAS.

Düsterbehn, F., in a review of the Ph. Germ. V, points out that strychnine nitrate is a new addition.—Apoth.-Ztg. 1911, v. 26, p. 242.

STYRAX.

Lloyd, John Uri, states that the earliest allusions to styrax were made by Aëtius and Ægineta about 1567 and that the early Arabian physicians were acquainted with it and its methods of production.—Bull. Lloyd Libr. 1911, No. 18, p. 85.

The Committee of Reference in Pharmacy (Third Report, p. 34) notes that storax, as at present imported, contains only about one-half as much total cinnamic acid as formerly. The reason for this is now being investigated with a view to drafting a suitable monograph. See also Pharm. J. 1911, v. 87, p. 812.

Hartwich, C., points out that the Ph. Germ. V now indicates the true origin of styrax, and regrets that a saponification number and an acid number for this drug have not been added.—Apoth.-Ztg. 1911, v. 26, p. 104.

An editorial (Perf. & Ess. Oil Rec. June, 1911) suggests a monograph for styrax purificatus which might be useful to the Revision Committee of the Ph. Brit.—Pharm. J. 1911, v. 87, p. 6.

Roure-Bertrand Fils (Sc. & Ind. Bull. 1911, Oct. p. 75) report that styrax can only be obtained in perfect qualities with the greatest difficulty. The demand is very active and the harvest must have been very much reduced on account of the drought.

Parry, Ernest J., states that the acid value of storax rarely exceeds 90; it is often as low as 75, whereas the colophony value (a not uncommon adulterant) rises to 150 or more. The ester value rarely falls below 125, and is frequently as high as 140, that of colophony never exceeding 10–20.—Chem. & Drug. 1911, v. 78, p. 379.

van Itallie, E. I., reports finding 1.1 and 1.6 per cent of ash in 2 samples of styrax.—Pharm. Weekblad, 1911, v. 48, p. 284.

Smith, Kline & French Co. (Analytical Report, 1911, p. 43) reports that 2 samples of styrax were examined. One had an abnormal odor and gave evidence of the presence of turpentine, and was rejected; the other was suspicious.

Pearson, W. A., examined 1 sample of storax which had been evidently adulterated with turpentine.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 130. See also Bull. Am. Pharm. Assoc. 1911, v. 6, p. 348.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 67) give the following figures for an excellent specimen of storax: Water

content, 22.6 per cent; soluble in 60° petroleum, 11.9 per cent; acid value, 9.4; ash, 0.8 per cent; and cinnamic acid, 12.4 per cent.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 20) find the 3 samples of crude storax examined during the year to show a distinct improvement in quality.

SULPHONETHYLMETHANUM.

An editorial (Pharm. Ztg. 1911, v. 56, p. 572) points out that the Ph. Germ. V includes trional as a synonym for methylsulfonylformal.

Kahn, Joseph, in a paper on organic synthesis, discusses the chemistry of sulphonethylmethanum U. S. P.—Proc. New York Pharm. Assoc. 1911, p. 63.

Reuthe discusses the chemistry of the hypnotics, particularly of veronal, sulphonal, and trional.—Pharm. Ztg. 1911, v. 56, pp. 555-556.

Gaultier, Caillaud, and Tomovici report a fatal case of poisoning in a young man of 20 years from a single large dose of trional.—Répert. pharm. 1911, v. 23, p. 131. See also J. Pharm. et Chim. 1911, v. 3, p. 32; and Bull. sc. pharmacol. 1911, v. 18, p. 695.

An editorial note (Chem. & Drug. 1911, v. 78, p. 289) quotes the report of the Registrar-General to the effect that both in 1908 and in 1909 there was a case of poisoning from trional, by negligence or accident.

Japhé, Fanny, quotes Ziehen (Deut. med. Wchnschr. 1908, 14), who claims that trional leads to habituation.—Therap. Monatsh. 1911, v. 25, p. 111.

SULPHONMETHANUM.

The Committee of Reference in Pharmacy (Third Report, p. 34) recommends that the melting point of sulphonal be 125°; the solubility in 90 per cent alcohol should be 1 in 80. See also Pharm. J. 1911, v. 87, p. 812.

Kahn, Joseph, in a paper on organic synthesis, discusses the chemistry of sulphonmethanum U. S. P.—Proc. New York Pharm. Assoc. 1911, p. 63.

An editorial note (Chem. & Drug. 1911, v. 78, p. 289) quotes the report of the Registrar-General to the effect that in 1908 there were 3 poisonings from sulphonal, by negligence or accident, and no suicides, as compared with 3 and 1, respectively, for 1909.

The Pharmaceutical Journal (1911, v. 87, p. 414) reports an inquest at Poplar on the body of a man who had been using sulphonal as a hypnotic.—See also p. 893, and v. 86, p. 723.

Robertson, writing in the J. M. Sc. (Apr. 1911) expresses the belief that sulphonal is a dangerous drug. He asserts that there is no other sedative in use the employment of which, in ordinary medicinal doses,

must be accompanied by so many precautions, and which is so beset by various dangers, as sulphonal.—*Therap. Gaz.* 1911, v. 35, pp. 573–574.

SULPHUR.

An unsigned note (*J. Ind. & Eng. Chem.* 1911, v. 3, p. 949) states that the sulphur industry in the United States in 1910 was confined to the four States of Louisiana, Nevada, Utah, and Wyoming, the production of the other States being practically negligible as compared with that of Louisiana.

An editorial (*Oil, Paint, and Drug Reporter*, 1911, v. 79, May 1, p. 7) reports that from a production of but 3,147 long tons of sulphur for the whole of the United States in 1900, the output has jumped to 239,312 long tons in 1910. See also v. 80, Oct. 23, p. 9, and Dec. 25, p. 28G.

An unsigned article (*New Idea*, 1911, v. 33, pp. 218–219) describes the method of sulphur mining in Louisiana and calls attention to some of the uses to which sulphur is being put at the present time.

Schumucker, George B., reports that deposits of sulphur in commercial quantities are found in Lower California, within 50 miles of the international boundary at Calexico, Cal.—*Cons. & Tr. Rep.* Apr. 13, 1911, p. 187.

Oliver, Thomas, presents a communication on the sulphur miners of Sicily: their work, diseases, and accident insurance.—*Brit. M. J.* 1911, v. 2, p. 12.

Höebling, V., reviews the progress made in the production of sulphur, sulphites, and sulphates.—*Chem. Ind.* 1911, v. 34, p. 398.

Burt and Usher report observations on the relative atomic weights of nitrogen and sulphur.—*Proc. Roy. Soc. Lond.* 1911, v. 85, pp. 82–98.

Waidner and Burgess, discussing the sulphur boiling point, state that it is the most exactly defined, the most certainly reproducible, and the most constant yet studied.—*Bur. Stand. Bull.* 1911, v. 4, pp. 127–130.

Wennmann, D., describes and illustrates a new apparatus for the determination of sulphur.—*Chem. Ztg.* 1911, v. 35, p. 596.

Smith and Carson, in a contribution on amorphous sulphur, discuss the freezing point curves of liquid sulphur and the separation of rhombic sulphur.—*Ztschr. physik. Chem.* 1911, v. 77, pp. 661–677.

Bodenstein and Karo report experimental observations on the slow combustion of sulphur.—*Ztschr. physik. Chem.* 1911, v. 75, pp. 30–47.

Lewis and Randall discuss the heat content of the various forms of sulphur, and report the determination of the total heat change between rhombic sulphur at 23° and liquid sulphur (in a state of equilibrium) at the temperatures 100°, 140°, 184°, and 390°.—*J. Am. Chem. Soc.* 1911, v. 33, pp. 476–488.

Nast, P. J., outlines a method of assay for sulphur ointment by boiling with saturated solution of barium hydroxide, decomposing the barium sulphide and barium thiosulphate subsequently with hydrochloric acid.—*Pacific Pharm.* 1911, v. 5, pp. 201–202.

Marcille presents a note on the mode of action of sulphur utilized in combating oïdium.—*Compt. rend. Acad. sc.* 1911, v. 152, pp. 780–783.

Kojo, Kenji, discusses the influence of sulphur on the elimination of phenol.—*Ztschr. physiol. Chem.* 1911–12, v. 76, pp. 159–169.

Maillard, L. C., discusses the influence of colloidal sulphur on sulphur exchanges in the organism.—*J. Pharm. et Chim.* 1911, v. 4, p. 282. See also p. 356, and *Compt. rend. Soc. Biol.* 1911, v. 70, pp. 940–943.

Frankl, Theodor, reports a number of experiments to determine the action of sulphur on the intestinal tract.—*Arch. exper. Path. u. Pharmacol.* 1911, v. 65, pp. 303–308.

Kopp, Frederick, states that sulphur has for its symptom a dry cough, accompanied with violent shooting pains in the chest. It has also a dull pressing pain in the right side of the chest.—*Hahnemann. Month.* 1911, v. 46, p. 636.

Fisher, Edgar A., states that sulphur seems to hasten the resolution in pneumonia when it is delayed. It encourages the absorption of the exudate and is indicated when the cough is loose and the expectoration thick, greenish, or yellow.—*J. Therap. & Diet.* 1911, v. 5, p. 201.

Additional references on the chemistry, pharmacology, and therapeutic uses of sulphur will be found in *Index Med.*; *J. Am. M. Assoc.*; *Chem. Abstr.*; *Zentralbl. Biochem. u. Biophysik*; and *Chem. Zentralbl.*

SULPHUR PRÆCIPITATUM.

The Committee of Reference in Pharmacy (Third Report, p. 34) states that precipitated sulphur should contain not more free acid than corresponds to 0.1 per cent of sulphuric acid, H_2SO_4 . The non-volatile residue should not exceed 0.5 per cent. See also *Pharm. J.* 1911, v. 87, p. 812.

An unsigned review of *Ph. Germ. V* (*Pharm. J.* 1911, v. 86, p. 582) points out that new qualitative tests for hydrochloric acid and sulphuretted hydrogen, are given.

Poulenc, Camille, reports a suggested modification of the assay method for precipitated sulphur.—*J. Pharm. et Chim.* 1911, v. 4, p. 544.

Amos, W. S., states that precipitated sulphur made after the official process is difficult to obtain, examination showing varying amounts of calcium sulphate, indicating that sulphuric acid and not hydrochloric acid was used as a precipitant.—*Proc. Missouri Pharm. Assoc.* 1911, p. 98.

Table showing some of the analytical results reported for precipitated sulphur.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Brown, L. A.	2	2	Bull. Kentucky Agric. Exper. Sta. 1911 Oct. pp. 25, 33.
Brown, Lucius P.	4	4	Rep. Tennessee Bd. Health, 1911, p. 155.
Jaffa, M. E.	3	3	Bull. California Bd. Health, 1911, v. 6, p. 492.
Southall Bros. & Barclay.	28	22	Rep. 1911, Birmingham, 1912, p. 39.

SULPHUR SUBLIMATUM.

The Committee of Reference in Pharmacy (Third Report, p. 34) proposes that sublimed sulphur contain not more free acid than corresponds to 0.25 per cent of sulphuric acid, H_2SO_4 , and that it leave no fixed residue. See also Pharm. J. 1911, v. 87, p. 812.

SUMBUL.

Lloyd, John Uri, states that sumbul or musk root was first introduced into Russia as a substitute for musk and was known in Germany in 1840 as a Russian product.—Bull. Lloyd Libr. 1911, No. 18, p. 86.

The Committee of Reference in Pharmacy (Third Report, p. 34) proposes to give the source as an undetermined species of *Ferula* instead of *Ferula sumbul* Hook f. See also Pharm. J. 1911, v. 87, p. 812.

Craig, Hugh, reports the opinion that extract of sumbul is the most active preparation of musk root.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 608.

Mott, J. V., asserts that sumbul in small doses will cure most cases of asthma if the disease begins before middle life. He quotes Buchanan to the effect that the action of musk root is so positively antispasmodic that it causes quasi suspension of the nerve forces in hydrophobia and snake bite.—Eclectic M. J. 1911, v. 71, p. 18.

SUPPOSITORIA.

Whorton, C., has found the cold method of making suppositories most satisfactory. He rubs the coca butter and medicament well in a mortar, adds just a pinch of benzoated lard to the mass, rolls the mass on a pill tile, and divides it into the desired number of suppositories.—Proc. Alabama Pharm. Assoc. 1911, p. 97.

Hertl, J., describes and illustrates a suppository press.—Pharm. Post, 1911, v. 44, p. 123.

Utech, P. Henry, states that glycerinated gelatin is seldom employed in retail practice. The almost universal base is cacao butter. He has had excellent results from the use of lanolin, as well as petro-

latum, as an excipient. He adds that repeated heating of cacao butter causes rancidity within a very short time.—*Western Druggist*, 1911, v. 33, p. 13.

Bruzzone, Maria, presents a note on the preparation of glycerin "ovules" hardened by tannic acid.—*Boll. chim. farm.* 1911, v. 50, p. 514.

The Committee of Reference in Pharmacy (Third Report, p. 34) suggests a modified method of preparation for glycerin suppositories. The formula remains practically unchanged. See also *Pharm. J.* 1911, v. 87, p. 846.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 35) report that some specimens of glycerin suppository with a gelatin basis listed as 90 per cent, contained only 66.7 per cent glycerin and had a refractive index (15°) 1.4503.

SYRUP.

[NOTE.—Following Government Printing Office style, which is governed by Webster's International Dictionary, the spelling "sirup" is used in this publication.]

An editorial (*Chem. & Drug*. 1911, v. 79, p. 18) commenting on the change, in the "Digest of Comments," in the spelling of the pharmacopœial title "Syrup" to "Sirup," expresses the hope that this does not mean that the United States Pharmacopœia is to adopt the new spelling. See also p. 225.

Utech, P. Henry, calls attention to the widely divergent opinions as to U. S. P. sirups, and notes that the chairman of the Revision Committee declares them to be the most permanent and elegant preparations in the book.—*Western Druggist*, 1911, v. 33, p. 13.

Culley, John, discusses the preparation and preservation of the chemical sirups of the U. S. P.—*Rocky Mountain Druggist*, 1911, v. 25, Feb. pp. 30-32.

Fleissig comments on the sirups of the Ph. Germ. V, and compares them with the corresponding preparations in the Ph. Helv. IV.—*Schweiz. Wehnschr. Chem. u. Pharm.* 1911, v. 49, p. 583.

Rocques and Sellier commend Chauvin's method of estimating gum in sirups by means of neutral lead acetate.—*Ann. chim. analyt.* 1911, v. 16, pp. 218-220.

Chauvin, A. C. (*Mon. Quesn.* 1911, p. 317), discusses the employment of alcoholic solution of neutral lead acetate for the estimation of gum in sirups.—*Ann. falsif.* 1911, v. 4, p. 452.

Duncan, C. A., discusses the making of sirups direct from drugs, and expresses the belief that the present processes for making sirups from fluid extracts and tinctures are unscientific and the resulting products pharmaceutically inelegant.—*Proc. Texas Pharm. Assoc.* 1911, pp. 104-105. Also *Southern Pharm. J.* 1910-11, v. 3, p. 428.

Pégurier, G., presents a communication on the making of sirups from fluid extracts, in which he states that the U. S. P. is among the

first, if not the first, to effect a needed reform.—Bull. pharm. Sud-Est, 1911, v. 16, pp. 18-22.

Patrouillard, Ch., recommends the use of concentrated extracts for the preparation of sirups.—Bull. sc. pharmacol. 1911, v. 18, pp. 96-98. See also Bull. pharm. Sud-Est, 1911, v. 16, p. 457.

Southall Bros. & Barolay (Rep. 1911, Birmingham, 1912, pp. 48-49) present a compilation of suggested standards and ranges of specific gravity for the official sirups.

SYRUPUS.

An editorial (Rev. Am. Farm. y. Med. 1910-11, v. 15, July, 1911, p. 23) discusses the making of simple sirup.

Hughes, George W., discusses the making of simple sirup of just the right weight.—Drug. Circ. 1911, v. 55, p. 217.

Boutron, A., criticizes and suggests a modification of the Ph. Fr. V monograph on simple sirup.—Bull. sc. pharmacol. 1911, v. 18, pp. 158-160. See also Bull. pharm. Sud-Est, 1911, v. 16, p. 455.

Phelps, Howard, describes and illustrates a percolator for making simple sirup.—Merck's Rep. 1911, v. 20, p. 224. Also Bull. Pharm. 1911, v. 25, p. 169.

J. F. R. describes and illustrates a percolator for making simple sirup.—Pacific Pharm. 1911, v. 5, p. 96.

The Committee of Reference in Pharmacy (Third Report, p. 34) proposes that the optical rotation of sirup range from $+56^{\circ}$ to $+58^{\circ}$, and after inversion, from -17° to -19° . See also Pharm. J. 1911, v. 87, p. 846.

Smith, Kline & French Co. (Analytical Report, 1911, p. 43) reports that 28 samples of sirup were examined and invert sugar was found to be present to the extent of about 0.2 per cent in all. One sample was found which contained 17 per cent of invert sugar.

Martin and others discuss the nature of the sugar supplied in Colorado, and express the belief that for satisfactory sirup it is necessary to use confectioners' "A" sugar rather than commercial granulated.—Rocky Mountain Druggist, 1911, v. 25, Oct. pp. 15-18.

Utech, P. Henry, suggests the use of "Crystal A" confectioners' sugar for making official and other sirups. He also points out that the water used must be distilled, not sterilized, if a perfect product is desired.—Drug Topics, 1911, v. 26, p. 278.

SYRUPUS ACIDI HYDRIODICI.

Culley, John, suggests that sirup of hydriodic acid be made extemporaneously, as the hydriodic acid from which it is made is more permanent than the sirup.—Rocky Mountain Druggist, 1911, v. 25, Feb. pp. 30-32.

SYRUPUS AURANTII.

Diekman, George C., reports an improved formula for sirup of orange, which is designed to preserve the fine aroma of the tincture of sweet orange peel but involves the addition of 10 per cent of glycerin.—Proc. New York Pharm. Assoc. 1911, p. 87.

Maranne, Is., presents a note on the assay of the Ph. Fr. V sirup of bitter orange peel.—Bull. sc. pharmacol. 1911, v. 18, pp. 355-358. See also Bull. pharm. Sud-Est, 1911, v. 16, p. 516.

SYRUPUS AURANTII FLORUM.

Diekman, George C., reports the opinion that stronger orange flower water should be directed in the formula for sirup of orange flower.—Proc. New York Pharm. Assoc. 1911, p. 88.

SYRUPUS BROMIDORUM N. F.

Norwood, T. W., states that the sarsaparilla taste of sirup of bromides, N. F., is nauseating to many people and he suggests the use of sirup of tolu as a flavor.—N. A. R. D. Notes, 1911-12, v. 13, p. 406.

SYRUPUS CALCII LACTOPHOSPHATIS.

The Committee of Reference in Pharmacy (Third Report, p. 34) proposes that the phosphoric acid be increased from 46 to 50 cc., and that the method of procedure be slightly altered. See also Pharm. J. 1911, v. 87, p. 846.

SYRUPUS FERRI IODIDI.

The Committee of Reference in Pharmacy (Third Report, p. 35) asserts that the quantity of iodine must be reduced to make the strength 5 per cent of ferrous iodide w/w, in order to correspond with the requirement of the International Agreement. See also Pharm. J. 1911, v. 87, p. 846.

An unsigned review of the Ph. Germ. V (Pharm. J. 1911, v. 86, p. 655) points out that sirup of iodide of iron is required to yield from 4.01 to 4.11 per cent of iodine by the prescribed test.

Rosenthaler, L., discusses the practicability of determining the iodide in sirup of ferrous iodide by means of a hydrargyrometric method.—Arch. Pharm. 1911, v. 249, p. 258.

Culley, John, recommends the Toplis formula for sirup of ferrous iodide, using reduced iron in place of iron wire.—Rocky Mountain Druggist, 1911, v. 25, Feb. p. 31.

Hommell, Philemon E., approves the use of 1 per cent of citric acid as a preservative for the sirup of iron iodide.—Pract. Drug. 1911, v. 29, July, p. 29.

Cheatham, T. A., asserts that many druggists make sirup of ferrous iodide from a commercial solution and do not follow the U. S. P. directions.—Proc. Georgia Pharm. Assoc. 1911, p. 37.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that a goodly number of pharmacists purchase a concentrated sirup under the name of fluid extract and dilute this according to the indications of physicians who may wish either the official 5 per cent sirup or the old 0.5 per cent preparation. Inspection has shown more than once that the "fluid extract" is not of the strength indicated; one should at least take the trouble to verify the content.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 239, and J. Pharm. Anvers, 1911, v. 67, p. 563.

Sayre, L. E., reports one sample of sirup of iodide of iron found to be dark brown in color and containing only 4.07 per cent of ferrous iodide.—Bull. Kansas Bd. Health, 1911, v. 7, p. 6.

Wilson, R. C., reports that the samples of sirup of ferrous iodide examined varied from 65 to 118 per cent U. S. P. strength.—Proc. Georgia Pharm. Assoc. 1911, p. 36.

Arny, H. V., reports on 15 samples of sirup of ferrous iodide: 9 samples up to the requirement; 6 samples were weaker, containing from 4.0 to 4.8 per cent FeI_2 , respectively.—Proc. Ohio Pharm. Assoc. 1911, p. 127.

Rabe, R. P., states that ferrum iod is indicated in cases of bearing down feeling; sitting makes worse.—Hahnemann. Month. 1911, v. 46, p. 399.

SYRUPUS FERRI, QUININÆ ET STRYCHNINÆ PHOSPHATUM.

Hommell, P. E., thinks there is very little call for the sirup of iron, quinine, and strychnine phosphate, and this preparation should be deleted from the U. S. P.—Proc. New Jersey Pharm. Assoc. 1911, p. 87. See also Pract. Drug. 1911, v. 29, July, p. 30.

Culley, John, suggests that the sirup of phosphates of iron, quinine, and strychnine be dropped from the Pharmacopœia with the glycerite used in making it, and that the elixir be used instead.—Rocky Mountain Druggist, 1911, v. 25, Feb. p. 31.

SYRUPUS HYPOPHOSPHITUM.

Utech, P. Henry, asserts that the addition of a few drops of dilute hypophosphorous acid prevents the deposit of basic calcium salt.—Western Druggist, 1911, v. 33, p. 13.

Glover, W. H., comments on the confusion between the two sirups of hypophosphites, and suggests that it can be overcome by coloring the sirup hypophosphitum with tincture persionis.—Proc. Massachusetts Pharm. Assoc. 1911, p. 67.

Caspari, Chas., Jr., thinks the proposed deletion of compound sirup of hypophosphites unwise.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 612.

SYRUPUS HYPOPHOSPHITUM COMPOSITUS.

Culley, John, considers the compound sirup of the hypophosphites to be the finest sirup in the Pharmacopœia. The formula is not complicated, easily prepared, and the finished product is a thing of beauty from a pharmaceutical standpoint.—Rocky Mountain Druggist, 1911, v. 25, Feb. p. 31.

Utech, P. Henry, recommends the addition of a small quantity of hypophosphorous acid in order to secure a permanently clear compound sirup of hypophosphites.—Bull. Pharm. 1911, v. 25, p. 369. Also Drug Topics, 1911, v. 26, p. 278.

Egan, Thos. A., thinks that compound sirup of hypophosphites U. S. P. is a source of trouble to many pharmacists, the fermentation being due to an insufficient amount of sugar. He overcame this difficulty by replacing 4 fluid ounces of water with glycerin.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 292.

Tartak, Leo, has found that the addition of 5 per cent glycerin will prevent the fermentation of compound sirup of hypophosphites.—Bull. Pharm. 1911, v. 25, p. 121.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 37) report that a sample of compound sirup of hypophosphites was found to contain only 0.003 per cent of iron as hypophosphite—a useless amount, governed by palatability and appearance rather than therapeutic value.

SYRUPUS PAPAVERIS N. F.

The Biennial Report of the Inspection of Pharmacies, 1909–10, states that it is hard to explain the obstinacy of physicians who prescribe the poppy sirup of the old pharmacopœia, made from the white poppy, which is very variable and of which, consequently, no one can calculate the activity.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 239, and J. Pharm. Anvers, 1911, v. 67, p. 563.

SYRUPUS PINI STROBI COMPOSITUS N. F.

Thum, John K., presents a modified formula for making sirup of white pine compound and suggests that the amount of alcohol in the menstruum for exhausting the crude drugs be increased so as to insure a more stable and elegant preparation.—Am. Druggist, 1911, v. 58, p. 241.

Wetterstroem, Theodore D., reports meeting with a sample of sirup of white pine, special, which was sirup, colored red with aniline,

and contained a trace of chloroform and alcohol. No reactions for tannin nor alkaloids were obtained.—Proc. Ohio Pharm. Assoc. 1911, p. 96.

Dunlap, Renick W., reports that 2 samples of white-pine sirup examined were not passed.—Rep. Ohio Dairy & Food Com. 1910-11, p. 48.

TALCUM.

An unsigned note states that the talc industry in the United States reached a maximum production of 150,716 short tons in 1910, while the imports in the same year were 8,378 tons.—Spatula, 1910-11, v. 17, p. 712. See also Cons. & Tr. Rep. Aug. 23, 1911, p. 843.

Düsterbehn, F., in a review of the Ph. Germ. V points out that talcum is described as being nearly insoluble in water and in acids and should be unchanged on heating in a test tube.—Apoth.-Ztg. 1911, v. 26, p. 242.

Caesar & Loretz (Jahres-Bericht, 1911, p. 141) outline a test for iron in talcum.

Smith, Kline & French Co. (Analytical Report, 1911, p. 43) reports that 5 samples of talcum were examined. The loss upon ignition in 2 samples was slightly excessive.

TAMARINDUS.

An unsigned article states that the tamarind tree, *Tamarindus indica* L., is common in the coast region of East Africa and is thought to be indigenous to Africa though extensively cultivated in India. The pulp of commerce comes almost entirely from India and is preserved by the addition of about 10 per cent of salt. The amount of tamarind pulp exported from India in 1909 was 573,518 pounds and in 1910, 702,011 pounds.—Der Pflanze. 1911, v. 7, pp. 628-629.

Tunmann, O., notes that the chief market for tamarind is Trieste and the drug itself comes chiefly from the East Indies and West Indies, the former being usually preferred.—Apoth.-Ztg. 1911, v. 26, p. 386.

Lloyd, John Uri, states that ancient Sanskrit writings mention tamarind, and that the fruit was known to the Arabians as Indian dates, under which name it was mentioned by early authors.—Bull. Lloyd Libr. 1911, No. 18, p. 86.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 68) report on a sample of East Indian tamarinds in their natural condition, not in sirup, which contained 18.5 per cent of invert sugar, estimated by Fehling's solution; cane sugar was absent. The presence of other optically active substances makes a polarimetric reading useless.

TARAXACUM.

Lloyd, John Uri, points out that there is no authentic record that dandelion was known to the classical writers of Greece or Rome. It is mentioned by Rhazes in the Tenth and by Avicenna in the Eleventh Centuries. In domestic mediæval medication and as an ingredient of many popular American "bitters" and "blood" purifiers, taraxacum was employed extensively.—Bull. Lloyd Libr. 1911, No. 18, p. 86.

Schneider, Albert, states that taraxacum has no starch, bast, or sclerenchyma cells. It is adulterated with refuse and foreign roots.—Merck's Rep. 1911, v. 20, p. 3.

Rusby, H. H., reports having seen cut dandelion root containing from 30 to 50 per cent of chopped stones.—Proc. Vermont Pharm. Assoc. 1911, p. 83.

Howard, Charles D., reports that 10 samples of dandelion root varied from 3.62 to 17.31 per cent of ash, the average being 7.55 per cent.—New Hampshire San. Bull. 1911, v. 3, No. 13, p. 255.

Allen and Brewis find for extract of taraxacum, 29.05 per cent of moisture, dried at 100–105°, and 6.24 per cent ash.—Pharm. J. 1911, v. 87, p. 172. Also Chem & Drug. 1911, v. 79, p. 214.

TEREBENUM.

Smith, Kline & French Co. (Analytical Report, 1911, p. 43) reports that 1 sample of terebene was examined, which contained an excessive amount of resinous substances.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 69) report that 1 genuine sample of terebene had a higher rotation than the usual article, and the following constants were observed: Specific gravity, 0.868; optical rotation, -5.24° ; refractive index, 1.4744; boiling point, 164° and 80 per cent distils below 174° .

Kistler, A. L., recommends 20 per cent solutions of terebene on disks in subacute stages of inflammation of the respiratory tract.—J. Am. Inst. Homœop. 1911, v. 3, p. 329.

TEREBINTHINA.

Lloyd, John Uri, points out that resinous, balsamic exudations have been used from all times as a balsam or pitch. The Indians of North America employed Canada balsam as an application to wounds.—Bull. Lloyd Libr. 1911, No. 18, p. 87.

A news note (Oil, Paint, and Drug Reporter, 1911, v. 80, Aug. 14, p. 40) states that the Government Forest Service has developed a method for the chipping of pine trees so as to obtain the maximum amount of turpentine and yet preserve the trees.

Peters, R., discusses true and adulterated turpentines and the materials used for adulterating turpentine.—Pharm. Zentralh. 1911, v. 52, pp. 1-13.

Nash, L. Myddelton, contributes a note on the examination of Finnish turpentine.—Analyst, 1911, v. 36, p. 577.

van Itallie, E. I., discusses the examination of larch turpentine and presents a table, showing results obtained with 6 samples.—Pharm. Weekblad, 1911, v. 48, p. 18.

Royal, George, gives terebinthina for nephritis. Urine bloody; blood and urine well mixed, or suppressed. Strangury, frequent urging, burning and soreness in the bladder and urethra. Urine has the odor of violets. Burning, drawing pain in region of kidney.—Hahnemann. Month. 1911, v. 46, p. 557.

TEREBINTHINA CANADENSIS.

Peters, R., discusses the nature of Canada balsam and calls attention to some of the substances used for adulterating the same.—Pharm. Zentralh. 1911, v. 52, p. 2.

The Committee of Reference in Pharmacy (Third Report, p. 35) recommends that, as the proposed formula for collodium does not contain Canada turpentine it might be omitted from the Pharmacopœia. See also Pharm. J. 1911, v. 87, p. 847.

TEREPINI HYDRAS.

Düsterbehn, F., in a review of the Ph. Germ. V, notes that the solubility of terpin hydrate at 15° is given as requiring 250 parts of water, 10 parts of alcohol, 100 parts of ether, and 200 parts of chloroform.—Apoth.-Ztg. 1911, v. 26, p. 243.

Bourdet discusses the Ph. Fr. V assay of terpin hydrate. He prefers the vacuum process in determining the water content.—J. Pharm. et Chim. 1911, v. 4, p. 69.

Manseau (Bull. Soc. Pharm. Bordeaux, p. 392) reviews the literature and urges a modification of the Codex formula for elixir of terpin hydrate.—Bull. pharm. Sud-Est, 1911, v. 16, p. 100.

THEOBROMA.

A news note (Drug. Circ. 1911, v. 55, p. 379) calls attention to Food Inspection Decision 136, which defines the meaning of certain names applied to chocolates and cocoas—the word "cocoa" being used by the department where druggists sometimes use "cacao."

Dubois, W. L., in the referee report on cacao and cacao products, discusses the instructions for cooperative work, and reports some of the comments offered by collaborators.—Proc. Assoc. Off. Agric. Chem 1911, 28th Ann. Conv., pp. 159-163 (Bull. Bur. Chem. U. S. Dept. Agric. 1912, No. 152).

Bernegau, L. H., points out that powdered cacao is used in pharmaceutical practice principally for coating tablets, and for this purpose should contain not much more than 20 per cent of fat. Of 21 lots examined, 4 ranged from 24.5 to 30.7 per cent, the other 17 from 18.3 to 23.3 per cent.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 120.

Rosenthaler, L., describes and illustrates the nature of the material obtained from theobroma by pyroanalysis.—*Ber. pharm. Gesellsch.* 1911, v. 21, p. 533.

Schneider, Albert, states that theobroma has some starch, brown parenchyma cells, oil, some vascular tissue, and a small amount of cocoa shells. Not more than 3 per cent of shell tissue should be present. Adulterated with cereal, cocoa shell, refuse.—*Merck's Rep.* 1911, v. 20, p. 3.

Du Bois and Lott discuss the determination of cacao shells in cacao powder.—*J. Ind. & Eng. Chem.* 1911, v. 3, pp. 251-252.

Ulrich, Chr., outlines a method for the detection of hulls in cacao and its preparations.—*Arch. Pharm.* 1911, v. 249, pp. 524-597.

Huss, Harald, discusses the detection of cacao shells in cacao products by means of the microscope.—*Ztschr. Unters. Nahr. u. Genussm.* 1911, v. 21, pp. 92-94.

In a subsequent communication he points out that the method is applicable only as a qualitative test.—*Ibid.* p. 676.

Spaeth, Eduard, discusses the artificial coloring of cacao and of chocolate and calls attention to methods for detecting the same.—*Pharm. Zentralh.* 1911, v. 52, pp. 998-1004.

Street, John Phillips, reports on 62 samples of cacao, 31 of which were adulterated or below standard.—*Rep. Connecticut Agric. Exper. Sta.* 1911, p. 215. See also pp. 115-127.

He also reports on 34 samples of chocolate, 4 of which were adulterated or below standard.—*Ibid.* pp. 102-110, 215.

THEOBROMINE.

Salant and Phelps, in a report of their observations under pathological conditions, state that experiments on rabbits show that demethylation of caffeine and theobromine is retarded in chronic alcoholism.—*Pharmacol. & Exper. Therap.* 1911-12, v. 3, p. 469.

Andry, Ch. (*Ann. dermatol.* 1911, p. 286), has found theobromine useful in avoiding poisoning by mercury, probably dependent upon its diuretic effect.—*Merck's Ann. Rep.* 1911, v. 25, p. 438.

THEOBROMINE SODIUM SALICYLATE.

Düsterbehn, F., in a review of the *Ph. Germ. V*, states that theobromine sodium salicylate is required to contain approximately 45 per cent of theobromine.—*Apoth.-Ztg.* 1911, v. 26, p. 243.

See also Pharm. J. 1911, v. 86, p. 582, and Chem. & Drug. 1911, v. 78, p. 125.

An editorial (Pharm. Ztg. 1911, v. 56, p. 573) points out that the Ph. Germ. V includes diuretin as a synonym for theobromino-natrium salicylicum.

Lorenzen, J., reports the examination of a number of inferior samples of theobromine sodium salicylate.—Pharm. Ztg. 1911, v. 56, p. 435.

The editor of the "Therapeutics" column (J. Am. M. Assoc. 1911, v. 56, p. 1331) states that in all ordinary doses there is no effect from theobromine sodium salicylate other than diuretic; as it acts on the renal epithelium without irritation, it can be used in both acute and chronic nephritis and in cardiac and hepatic dropsy. Experimentally, poisoning can be caused with symptoms of cardiac disturbance and dyspnoea, increased temperature, and some nervousness.

THYMOL.

Lloyd, John Uri, states that under the name of camphor of thyme, an apothecary at the court of Berlin named Neumann, in 1725, described thymol which was so named by Lallemant in 1853.—Bull. Lloyd Libr. 1911, No. 18, p. 87.

Schimmel & Co. (Semi-Annual Report, Oct. 1911, p. 115) report that the imports of ajowan seed via Hamburg up to the end of August only amounted to about 7,850 bags, as compared with 25,500 bags in the corresponding period of the year 1910.

Düsterbehn, F., in a review of the Ph. Germ. V points out that the melting point of thymol has been replaced by the solidification point requirement of 49° to 50°.—Apoth.-Ztg. 1911, v. 26, p. 243.

See also Pharm. J. 1911, v. 86, p. 582, and Chem. & Drug. 1911, v. 78, p. 125.

Schimmel & Co. (Semi-Annual Report, Apr. 1911, p. 130), discussing the Ph. Germ. V requirements for thymol, remark that it is not quite apparent why the pharmacopœia quotes the solidifying point of thymol, while under menthol, for instance, the melting point is indicated. The melting point of thymol lies between 50.5 and 51.5°.

They also (*Ibid.* p. 133), in discussing the requirements of the Ph. Ross. VI, point out that thymol boils at 232° (753 mm.) if the mercury column is entirely surrounded by steam.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 3) proposes slight modifications in the monograph for thymol, gives the formula as $C_{10}H_{14}O$, but retains the name isopropylmetacresol; melting point in a capillary tube, 50° to 51°, is added. See also Pharm. J. 1911, v. 87, p. 847.

Smith, Kline & French Co. (Analytical Report, 1911, p. 43) reports that 3 samples of thymol were examined. One was slightly colored.

Cousin and Hérissé have developed a simple and advantageous method for the preparation of dithymol, consisting essentially in the oxidation of thymol by iron perchloride in very dilute aqueous solution.—*J. Pharm. et Chim.* 1911, v. 3, p. 194.

Roure-Bertrand Fils (*Sc. & Ind. Bull.* 1911, Oct. pp. 114–115) present a review of recent literature on the chemistry of thymol and carvacrol.

Fisher, A. C., calls attention to the dangerous advice in Osler's "Practice of Medicine" [editions of 1900, 1907, and 1911] wherein the use of castor oil, whisky, and brandy, all of which dissolve thymol, is recommended in the treatment of hookworm disease.—*J. Am. M. Assoc.* 1911, v. 57, p. 1556.

Schultz, W. H., presents a study of the relative efficiency and danger of thymol as compared with certain other remedies proposed for hookworm disease.—*J. Am. M. Assoc.* 1911, v. 57, pp. 1102–1106. Also *Tr. Am. M. Assoc. Sec. Pharm. & Therap.* 1911, pp. 48–62.

Strosnider, C. F., discusses the prevalence, harmful, results and treatment of hookworm disease.—*J. Am. M. Assoc.* 1911, v. 56, pp. 1024–1027.

Railliet, G., contributes a note on the employment of thymol against parasites of the appendix.—*Compt. rend. Soc. Biol.* 1911, v. 70, p. 353.

Tyrode, Maurice Vejux, notes the good results obtained by Cade and Garin in the treatment of parasitic enteritis, but calls attention to the experiments of Railliet, who found that thymol had no effect whatever upon worms within the blind appendix.—*Boston M. & S. J.* 1911, v. 164, p. 686.

Wood, Horatio C., Jr., in an article on the possibility of intestinal antiseptics, calls attention to the evident limitations of the use of thymol as an intestinal antiseptic.—*Therap. Gaz.* 1911, v. 35, pp. 153–156.

The Editor of the "Therapeutics" column (*J. Am. M. Assoc.* 1911, v. 56, p. 1108) discusses the therapy of official and other preparations of thymol.

Buckley, J. P., thinks that, in the treatment of the root canal, after live pulps have been removed, thymol has not been used to the extent which its importance merits.—*Dental Digest*, 1911, v. 17, p. 360.

THYMOLIS IODIDUM.

The Biennial Report of the Inspection of Pharmacies, 1909–10, states that thymol iodide is frequently poorly washed and considerably adulterated, containing 20 to 30 per cent of substances insoluble in ether. One sample assayed only 15 per cent iodine in place of 46 per cent.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 232, and *J. Pharm. Anvers*, 1911, v. 67, p. 521.

TINCTURÆ.

Sargeant, F. Pilkington, discusses the evolution of a tincture from an historical standpoint.—*Pharm. J.* 1911, v. 87, p. 716.

Xrayser II commends as best suited to British conditions the adherence of the Ph. Brit. committee to the British and American system of percentages; tinctures are to be made in w/v, instead of by the Continental plan of w/w, and thus the tinctures will only conform approximately to the International Standard.—*Chem. & Drug.* 1911, v. 79, p. 381.

An unsigned review (*Pharm. J.* 1911, v. 86, p. 708) of the Ph. Germ. V points out that tinctures are still directed to be made by maceration, although percolation is used entirely in connection with fluid extracts.

Roderfeld, A., calls attention to the changes in the formulas and the requirements for the official Ph. Germ. V tinctures.—*Apoth.-Ztg.* 1911, v. 26, pp. 290-291.

Fleissig comments on the tinctures of the Ph. Germ. V and compares them with the corresponding preparations in the Ph. Helv. IV.—*Schweiz. Wchnschr. Chem. u. Pharm.* 1911, v. 49, pp. 584-585.

Ramsaur, D. W., discussing the reason why some of our preparations are unreliable, asserts that the pharmacist is in no position to test physiologically the potency of tinctures which he may make by maceration or percolation.—*Proc. Florida Pharm. Assoc.* 1911, p. 17.

An unsigned article (*N. A. R. D. Notes*, 1911, v. 12, p. 17) states that tinctures made from fluid extracts seldom if ever meet the requirements of the Pharmacopœia, and never meet the requirements of the medical men as far as therapeutics are concerned.

Sayre, L. E., cautions druggists to make their official preparations strictly according to the U. S. P. If the Pharmacopœia requires the tincture to be made from the drug itself, and not by diluting the fluid extract or any concentrated preparation, the directions should be followed.—*Bull. Kansas Bd. Health*, 1911, v. 7, p. 173.

Whorton, C., thinks the proposition to make tinctures from fluid extracts is a trap set for the retail druggist by the pharmaceutical manufacturer and benefits the latter class only.—*Proc. Alabama Pharm. Assoc.* 1911, p. 95.

Burge, J. O., asserts that diluted fluid extracts are not tinctures and will not meet the requirements of the pure food and drugs law.—*Proc. Tennessee Pharm. Assoc.* 1911, p. 55.

Diekman, George C., reports the opinion that while the making of tinctures from fluid extracts may be permissible in a few cases, the great danger is in the abuse.—*Proc. New York Pharm. Assoc.* 1911, p. 80.

Lesueur, Maurice, discusses the influence of the method of preparation on the composition and stability of alcoholatures and alcoholic

tinctures; sterilization by boiling alcohol. The latter method in a number of cases is highly recommended.—*J. Pharm. et Chim.* 1911, v. 3, pp. 211-213.

Tankard, Arnold Rowsby, thinks it would be a distinct advantage if the approximate amount of alcohol in the finished tinctures, etc., prepared by the official methods, were added to the monographs concerned.—*Pharm. J.* 1911, v. 87, p. 73.

van Itallie, E. I., reports a number of observations on the specific gravity and extract content of a number of official Ph. Ndl. IV tinctures.—*Pharm. Weekblad*, 1911, v. 48, pp. 717-719.

Ziegler, J., discusses the estimation of the specific gravity and extract content of tinctures and fluid extracts, and presents a table showing the specific gravity and extract content of a number of official Ph. Germ. V tinctures of vegetable drugs.—*Apoth.-Ztg.* 1911, v. 26, p. 868.

Thomann (*Apoth.-Ztg.* No. 83, 1911) comments on the above.—*Schweiz. Wchnschr. Chem. u. Pharm.* 1911, v. 49, pp. 758-759.

Anselmino, Otto, thinks that our present knowledge of galenical preparations is so uncertain that it would be impractical to require specific gravity, extract content, and ash content for tinctures of vegetable drugs. He points out that a variation of five units in the fourth decimal place of specific gravity would indicate a difference of 2.5 per cent in the alcohol content of a preparation.—*Ber. pharm. Gesellsch.* 1911, v. 21, p. 201.

Southall Bros. & Barclay (*Rep.* 1911, Birmingham, 1912, pp. 49-51) present a compilation of suggested standards, ranges of specific gravity, and ranges of percentage by volume of alcohol for the official tinctures.

Riedel's *Berichte* (1911, pp. 21-25) reports a number of observations in connection with the specific gravity and extract content of tinctures and fluid extracts; results are presented in the form of tables giving the minimum and maximum specific gravity and the minimum and maximum extract content of the several preparations.

An unsigned review of volume 1 of Ernest J. Parry's work on food and drugs points out that the margin between 0.4 and 0.75 per cent, for example, can not be a standard even when we are told what active constituent the figure refers to.—*Brit. & Col. Drug.* 1911, v. 60, p. 471.

An editorial (*Am. Druggist*, 1911, v. 58, p. 140) condemns tinctures of fresh herbs and calls attention to a report by Southall Bros. & Barclay, Limited, on the variable nature and general unreliability of extracts of green drugs.

Hommell, P. E., discusses the doses of some bitter fluid extracts and tinctures of the U. S. P. He expresses himself as being very much in favor of a minimum and maximum dosage.—*Merck's Rep.* 1911, v. 20, p. 195.

TINCTURE N. F.

TINCTURA BRYONIE N. F.

Power and Moore contribute a note on the constituents of bryony root.—Pharm. J. 1911, v. 86, p. 626.

They report an examination of bryony root and discuss the constituents. They conclude that the activity of bryony root can not be attributed to a single definite principle and it would appear that its purgative property resides chiefly in the resinous and alkaloidal constituents. The assumption of previous investigators that the active principle is a glucoside has been shown to be incorrect.—J. Chem. Soc. Lond. 1911, v. 99, pp. 937–946.

Showers, Geo. T., states that the pathological conditions comprehended within the sphere of bryonia are almost limitless; embracing mainly the entire mucous tract, muscular system, and serous structures with their contained organs.—Hahnemann. Month. 1911, v. 46, p. 923.

Royal, George, gives bryonia for scanty, hot, dark, red, almost brown urine with drawing stitching pain in the back and general soreness and stiffness of all the muscles. The bowels are usually constipated. No casts, no albumin, simple congestion of the kidney due to "taking cold."—Hahnemann. Month. 1911, v. 46, p. 556.

An editorial (Ellingwood's Therap. 1911, v. 5, p. 443) states that bryonia will relieve soreness of the serous membranes as positively and as invariably as opium will control pain.

TINCTURE OF CACTUS GRANDIFLORUS.

Hatcher and Bailey present a paper on the pharmacology of *Cactus grandiflorus* and conclude that it has no pharmacologic action whatever.—J. Am. M. Assoc. 1911, v. 56, pp. 26–32.

Scudder notes that two labored and lengthy reports on cactus have been published by the Council of Pharmacy, and that this drug is to be discarded as valueless, because to the laboratory investigator it can not be determined to have a toxic or other action on rabbits or guinea pigs similar to that of digitalis.—Eclectic M. J. 1911, v. 71, p. 206.

An editorial (Hahnemann. Month. 1911, v. 46, pp. 59–60), in commenting on a report of the Council on Pharmacy and Chemistry of the American Medical Association on cactus, states that the members of the Council merely contend that, because cactus fails to produce poisonous effects in some instances on animals in laboratory experiments, it should not be used by physicians in the treatment of disease.

Palmer, Chauncey D., states that cactus is a remedy of superior power. Acting on the sympathetic nervous system, through the

cardiac plexus, it improves the nutrition of the heart and quickly strengthens this organ.—*Eclectic Med. Glean.* 1911, v. 7, p. 591.

TINCTURE OF CARAMEL.

Menge, Geo. A., outlines a method for standardizing tincture of caramel by treating sugar with sulphuric acid and subsequently neutralizing the solution with potassium hydroxide.—*Am. J. Pharm.* 1911, v. 83, pp. 113–114.

Smith, F. A. Upsher, describes a colorimetric test for caramel consisting of Nesslerized solution of ammonium oxalate.—*Ibid.* pp. 411–412. See also *Proc. Minnesota Pharm. Assoc.* 1911, p. 79; and *Drug. Circ.* 1911, v. 55, p. 466.

Kebler, L. F., states that caramel solutions are subject to change, so that comparison with a readily reproduced standard color would appear to offer a desirable solution of the caramel color problem.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 128.

Stockinger, Otto, reports that of 21 samples of caramel examined, all were completely soluble in water, but 1 was not completely soluble in dilute acids, and 5 contained excessive amounts of carbonates.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 120.

Lichthardt outlines an identification test for caramel.—*Western Druggist*, 1911, v. 33, p. 137.

Hazewinkel, J. J. (*Arch. Suikerind. Nederl.-Ind.*, v. 18, pp. 519–546), discusses the preparation of caramel.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 972.

Wechsler, M. (*Eng. Pat.* 13,225, May 31, 1910), describes a process for the manufacture of (caramel) organic coloring matter from carbohydrates and the like.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 1226.

TINCTURA FERRI CITRO-CHLORIDI N. F.

Dawson, E. S., suggests that tincture of citro-chloride of iron would make a valuable addition to the U. S. P., but the formula in the U. S. Dispensatory yields a better preparation than the N. F. formula.—*Proc. New York Pharm. Assoc.* 1911, p. 93.

Campbell, Andrew, states that the proposed Squibb modification in the making of solution of citro-chloride of iron is not satisfactory.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 113.

Raubenheimer, Otto, states that it makes no difference whether you take sodium or potassium citrate, but it is necessary to add a little sodium bicarbonate to insure a green color. If the green color is not obtained it is evidence that the solution of iron chloride has been too acid.—*Proc. New York Pharm. Assoc.* 1911, p. 96.

TINCTURA IGNATIE N. F.

Jones, Eli, G., states that ignatia is of benefit in the following conditions: In suppressed grief, desire to be alone, sighs continually; in

fright causing convulsions in children after punishment; in chorea, hysteria, and diphtheria.—J. Therap. & Diet. 1911, v. 5, p. 367.

Dewey, W. A., states that for neuralgia like pain in rectum, ignatia may be the remedy.—Hahnemann. Month. 1911, v. 46, p. 632.

TINCTURA PERSIONIS N. F.

Amos, W. S., reports that cudbear is obtainable only in technical quality, frequently mixed with some wood fibre, as ground red saunders, or pine sawdust colored.—Proc. Missouri Pharm. Assoc. 1911, p. 97.

Whitney, Mrs. D. V., in making tincture of cudbear, prefers macerating for several days before percolation so as to insure complete exhaustion and more satisfactory results.—Proc. Missouri Pharm. Assoc. 1911, p. 99.

Taylor, Beulah E., reports considerable variation in the color of compound digestive elixir and compound sirup of asarum due to variation in the tincture of cudbear.—Apothecary, June, 1911, v. 23, p. 16.

TRAGACANTHÆ.

Lloyd, John Uri, states that to locate exactly the first use of tragacanth would be to antedate historic records. Theophrastus, three centuries before Christ, described it and located its origin. Dioscorides and a number of Arabian writers give it due attention.—Bull. Lloyd Libr. 1911, No. 18, p. 87.

Gehe & Co. (Handelsbericht, 1911, p. 111) present tables showing the amount of tragacanth imported into London during the years 1907 to 1910, inclusive.

Rusby, H. H., states that tragacanth has been a bone of fierce contention during the year, two fraudulent practices having been indulged in, namely, the sale of India gum in place of or mixed with tragacanth, and the sale of a grade of tragacanth which does not meet the official standard.—Oil, Paint and Drug Reporter, 1911, v. 80, November 20, p. 28K.

Warth, Albin H., considers the U. S. P. test for tragacanth incomplete and misleading. The chemical tests are ill described and in part unworkable when applied to the examination of the powdered gum.—Pract. Drug. 1911, v. 29, July, p. 30.

Hartwich, C., points out that the Ph. Germ. V now limits the origin of tragacanth to the astragalus varieties grown in Asia Minor. He also notes that the pharmacopœia prohibits the occurrence of boiled starch, dextrin, or other gums, but that it does not indicate how these are to be detected.—Apoth.-Ztg. 1911, v. 26, p. 105.

See also Pharm. J. 1911, v. 86, p. 654.

Caesar & Loretz (Jahres-Bericht, 1911, p. 143) discuss the testing of tragacanth and present a table showing the limitations for ash included in several pharmacopœias.

Sollmann, Torald, points out that tragacanth and other gums give a golden or brownish-yellow color on heating with sodium hydroxide solution, but they do not reduce Fehling's solution even on prolonged heating.—*Am. J. Pharm.* 1911, v. 83, pp. 176-177.

Schneider, Albert, reports on a sample of tragacanth gum which was adulterated with starch.—*Pacific Pharm.* 1911, v. 5, p. 179.

Wiley, H. W., reports gum tragacanth of inferior quality, very low grade, and adulterated with Indian gum.—*Ann. Rep., U. S. Dept. Agric.* 1911-12, p. 424.

Smith, Kline & French Co. (Analytical Report, 1911, p. 44) reports that the quality of 6 of the 11 samples of tragacanth examined was suspicious. India gum seems to be the adulterant. See also *Proc. Pennsylvania Pharm. Assoc.* 1911, p. 130, and *Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 348.

Jaffa, M. E., reports a sample of material consisting largely of Indian gum mixed with a very small proportion of tragacanth.—*Bull. California Bd. Health*, 1911, v. 7, p. 163.

Notice of Judgment, No. 998, under the food and drugs act, deals with the adulteration and misbranding of tragacanth.

Southall Bros. & Barelay (Rep. 1911, Birmingham, 1912, p. 20) reports that a sample of "Indian" tragacanth yielded 4.86 per cent of ash, and gave the reactions characteristic of the official drug.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 71) report on 2 especially white samples of tragacanth which left 2.9 and 2.5 per cent of ash, respectively.

Welborn, G., urges the importance of his glycerinum tragacanthæ which is an almost universally applicable excipient by reason of its adhesiveness, compatibility, plasticity, and the small quantity required.—*Pharm. J.* 1911, v. 87, p. 839.

An unsigned article (*N. A. R. D. Notes*, 1911, v. 12, p. 306) states that tragacanth is deserving of a more extended usage as an emulsifying agent.

TRITICUM.

Lloyd, John Uri, states that the ancients were familiar with this grass with a creeping root stalk, but it is impossible to determine the species valued by them. It is mentioned by Dioscorides, Pliny, and other early writers.—*Bull. Lloyd Libr.* 1911, No. 18, p. 88.

Rusby, H. H., states that a single shipment of a grass rhizome somewhat resembling triticum, but totally distinct therefrom, has been offered and rejected under this name.—*Oil, Paint, and Drug Reporter*, 1911, v. 80, Nov. 20, p. 28K.

Allen, Nathan L., thinks that in many troublesome bladder cases there is no remedy that will do more to soothe the mucous membrane than an infusion made from triticum repens.—*J. Therap. & Diet.* 1911, v. 5, p. 103.

TROCHISCI.

The Committee of Reference in Pharmacy (Third Report, p. 35) recommends that troches of tannic acid be made with the tolu basis in place of the fruit basis at present official. See also *Pharm. J.* 1911, v. 87, p. 847.

TUBERCULIN.

Lockemann, Georg, presents a contribution to the chemistry of tuberculin.—*Ztschr. physiol. Chem.* 1911, v. 73, pp. 389–397.

Henri, Helbronner and von Recklinghausen (Eng. Pat. 7954, Apr. 2, 1910) describe a method for the preparation of tuberculin and serums by subjecting tuberculin or cultures of the bacilli to the action of ultra-violet light.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 572.

The *Annales de Pharmacie* (Louvain, 1911, v. 17, p. 105) reproduces the Belgian regulations with reference to tuberculins.

Packard, George B., states that, while he would not use tuberculin as a routine treatment in all cases of joint tuberculosis, he considers it a valuable adjunct.—*J. Am. M. Assoc.* 1911, v. 56, p. 1844.

Hosford, A. Stroud, concludes, from his study on the ophthalmoreaction of Calmette in the early diagnosis of phthisis, that a negative result by no means excludes pulmonary tuberculosis; some very advanced cases failed to give a reaction.—*Brit. M. J.* 1911, v. 2, p. 471. See also *Lancet*, 1911, v. 181, p. 1072.

Bruyant, L., presents a note on the relation between anaphylaxis and the tuberculin reaction.—*Compt. rend. Soc. Biol.*, 1911, v. 70, p. 782.

Sézary, A., presents a comparative study of the intradermal, subcutaneous, and focal reactions to tuberculin.—*Compt. rend. Soc. Biol.* 1911, v. 71, p. 95.

Wallow, Harold, discusses the value of tuberculin in the diagnosis and treatment of pulmonary tuberculosis.—*Practitioner*, 1911, v. 87, pp. 689–693.

Calmette and Massol present a communication on tuberculous antibodies and antigens.—*Compt. rend. Soc. Biol.* 1911, v. 71, pp. 191–194, 341–344. Also *Compt. rend. Acad. Sc.* 1911, v. 153, pp. 420–422.

Pottenger, Francis M., details some difficulties encountered in the therapeutic use of tuberculin.—*J. Am. M. Assoc.* 1911, v. 57, p. 940. Also *Tr. Am. M. Assoc. Sec. Pharm. & Therap.* 1911, pp. 86–95.

Meyer, Fritz, discusses the use of tuberculin by the practicing physician, and concludes that until a satisfactory serum has been devised, tuberculin will undoubtedly constitute one of the more important remedies in the treatment of tuberculosis.—*Therap. Monatsh.* 1911, v. 25, pp. 465–472.

Sanders, George, discusses combined vaccine therapy in pulmonary tuberculosis.—N. York M. J. 1911, v. 94, pp. 976-977.

Milton, J. Penn, is unable to satisfy himself that the use of tuberculin in the treatment of pulmonary tuberculosis is safe, certain, justifiable, or necessary.—Brit. M. J. 1911, v. 2, p. 522. See also pp. 635, 643, 708, 774, 859, 947.

An editorial (Lancet, 1911, v. 181, p. 1648) deplores the recent puffing of tuberculin as an infallible remedy for practically every form of pulmonary tuberculosis, and calls attention to the analysis presented by O. Helm (Hospitalstid.).

Rayevsky, Charles, reports some observations on the use of tuberculinum purum in pulmonary tuberculosis.—N. York M. J. 1911, v. 94, pp. 973-976.

Shepard, C. A., discusses the production of immunity in tuberculosis by intravenous injection of tuberculin.—J. Am. M. Assoc. 1911, v. 57, p. 945. Also Tr. Am. M. Assoc. Sec. Pharm. & Therap. 1911, pp. 103-116.

Kress, George H., presents a convenient table for the use of tuberculins.—J. Am. M. Assoc. 1911, v. 56, p. 1252.

An editorial (Pharm. J. 1911, v. 87, p. 844) calls attention to the recent discussion in the Lancet on the method of expressing the dose of tuberculin.

Day, John Roberson, states that among the constitutional remedies to be thought of is tuberculinum 30 in weekly doses for the tubercular state.—Hahnemann. Month. 1911, v. 46, p. 155.

Rabe, R. P., states that tuberculinum 200 is indicated in cases of deep acting. Worse in damp weather; wants cold air blowing on him. Incipient tuberculosis. In phthisis can not eat.—*Ibid.* p. 400.

De Vine, J. F., reports statistics of tuberculin tests and post mortem findings.—Am. Vet. Rev. 1911, v. 39, p. 431.

Additional references on the nature and use of tuberculin will be found in Index Med.; J. Am. M. Assoc.; Hyg. Rundschau; and Zentralbl. Biochem. u. Biophysik.

ULMUS.

Lloyd, John Uri, states that the Indians and settlers of North America valued the inner bark of *Ulmus fulva* as a poultice; in certain skin diseases they used it as an external application, and as a soothing drink in fevers.—Bull. Lloyd. Libr. 1911, No. 18, p. 88.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 30) report that 2 genuine samples of elm bark had an ash content of 11.8 and 12.7 per cent, respectively. One adulterated sample left 32.7 per cent ash, and was found to contain 20 per cent of talc admixture.

UNGUENTA.

Roderfeld, A., discusses the ointments of the Ph. Germ. V and calls attention to the several changes that have been made.—*Apoth.-Ztg.* 1911, v. 26, pp. 300–301.

Wild, R. B., discusses the official Ph. Brit. ointments, with special reference to the substances used as bases.—*Brit. M. J.* 1911, v. 2, p. 161. See also *Pharm. J.* 1911, v. 87, pp. 131, 266.

Guyer and Ewing present the following table showing the relative demand for the official ointments in the United Kingdom.—*Pharm. J.* 1911, v. 87, p. 626.

Table of the relative demand for the official ointments.

Boric acid.....	1,000	Red oxide of mercury.....	20
Oxide of zinc.....	575	Lead acetate.....	17
Ammoniated mercury.....	337	Salicylic acid.....	17
Sulphur.....	222	Chrysarobin.....	13
Spermaceti.....	120	Tar.....	12
Mercuric nitrate, dilute.....	90	Iodoform.....	10
Yellow oxide of mercury.....	70	Iodine.....	10
Carbolic acid.....	70	Capsicum.....	7
Resin.....	64	Eucalyptus.....	6
Mercuric nitrate.....	58	Lead iodide.....	6
Gall and opium.....	58	Potassium iodide.....	6
Oleate of zinc.....	50	Lead carbonate.....	4
Compound mercury.....	46	Sulphur iodide.....	4
Hamamelis.....	28	Stavesacre.....	3
Glycerin lead subacetate.....	21	Calomel.....	2
Belladonna.....	20	Red iodide of mercury.....	2
Conium.....	20		

See also *Year-Book of Pharmacy*, 1912, p. 350.

An editorial (*Pharm. J.* 1911, v. 87, p. 620) reviews the paper by Guyer and Ewing on the official ointments. See also p. 700; *Chem. & Drug.* 1911, v. 79, pp 717, 745; and *Lancet*, 1911, v. 181, p. 1499.

Boa, Peter, discusses some of the Ph. Brit. ointments prepared with paraffin bases.—*Pharm. J.* 1911, v. 86, p. 407.

Utech, P. Henry, states that an ointment base capable of absorbing large quantities of light oils, such as olive, gaultheria, etc., can be made of equal parts of beeswax and lanolin.—*Western Druggist*, 1911, v. 33, p. 14.

Bartels and van der Wielen report some observations on the water absorbing property of different ointment bases.—*Pharm. Weekblad*, 1911, v. 48, pp. 1021–1025.

Diekman, George C., reports the opinion that ointments, as a class, need careful revision. The unguentum of the present Pharmacopœia is much inferior to that of 1880.—*Proc. New York Pharm. Assoc.* 1911, p. 82.

An unsigned note reviews the discussion on cerates and ointments at a recent meeting of the Medico-Pharmaceutical Section of the Cleveland Academy of Medicine.—*Bull. Pharm.* 1911, v. 25, p. 169.

Hopp, Lewis C., presents a brief paper on ointments.—*Pract. Drug.* 1911, v. 29, June, p. 35.

Davies, John J., states that stock ointments that have become granulated can be brought back to their original condition simply by melting them.—*Drug. Circ.* 1911, v. 55, p. 568.

Nast, P. J., discusses the assay of some U. S. P. ointments.—*Pacific Pharm.* 1911, v. 5, pp. 201–202.

Braubach, C., discusses the qualitative and quantitative analysis of ointments and similar preparations.—*Pharm. Ztg.* 1911, v. 56, pp. 675–676, 684–686.

Stephan, A., presents a number of formulas for soluble ointments, the basic constituent being a mixture of tragacanth, glycerin, and water.—*Ztschr. allg. österr. Apoth.-Ver.* 1911, v. 49, pp. 209–211.

Curtis, Edwin B., presents a brief paper on greaseless creams.—*Pract. Drug.* 1911, v. 29, February, p. 32.

Corlett, William Thomas, presents a communication on ointments and their therapeutic use.—*Ibid.* 1911, June, p. 35.

The *Pharmaceutical Journal* (1911, v. 87, p. 529) discusses the science and art of dispensing ointments.

An unsigned article (*Ztschr. allg. österr. Apoth.-Ver.* 1911, v. 49, p. 28) describes and illustrates an apparatus for making ointments.

An unsigned article (*D.-A. Apoth.-Ztg.* 1911–12, v. 32, p. 131) discusses the production of ointments and describes and illustrates an ointment mill.

An unsigned article (*Pharm. Ztg.* 1911, v. 56, p. 150) describes and illustrates an apparatus for filling collapsible tubes with ointments and similar preparations.

Amberger, C., in German patent 229,306, describes a method for the production of ointments containing inorganic colloids.—*Apoth.-Ztg.* 1911, v. 26, p. 95. See also *J. Soc. Chem. Ind.* 1911, v. 30, p. 240.

UNGUENTA.

UNGUENTUM ACIDI BORICI.

The Biennial Report of the Inspection of Pharmacies, 1909–10, states that borated vaselin is often sold in place of simple boric ointment.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 236; also *J. Pharm. Anvers*, 1911, v. 67, p. 524.

Nast, P. J., suggests the assay of boric acid ointment by exhausting a known amount with petroleum benzin in a Soxhlet apparatus.—*Pacific Pharm.* 1911, v. 5, p. 202.

UNGUENTUM AQUÆ ROSÆ.

Wild, R. B., thinks that the rose water ointment might be improved.—*Pharm. J.* 1911, v. 87, p. 133. Also *Brit. M. J.* 1911, v. 2, p. 162.

Heldmann, P. K., suggests the use of liquid petrolatum in place of oil of almond in the ointment of rose water, U. S. P.—Proc. New York Pharm. Assoc. 1911, p. 91.

UNGUENTUM HYDRARGYRI.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 632) states that ointment of mercury is required to contain 30 per cent of mercury. The formula requires mercury 30, wool fat 5, arachis oil 1, lard 40, suet 24. See also Am. Druggist, 1911, v. 58, p. 139.

Diekman, George C., reports the opinion that the addition of wool fat to the formula for mercurial ointment would expedite the division of the mercury.—Proc. New York Pharm. Assoc. 1911, p. 82.

Raubenheimer, Otto, states that, while the addition of wool fat to mercurial ointment might be a very good aid to extinguish mercury, he does not think it is necessary, because oleate of mercury will do the same thing.—*Ibid.* p. 95.

Cappellini, Italo, outlines a new process and presents a formula for ointment of mercury in which he proposes the use of turpentine and lard as the base.—Boll. chim. farm. 1911, v. 50, pp. 4-5.

An editorial note (Pharm. J. 1911, v. 87, p. 549) states that mercurial ointment is the English name adopted in the new B. P. C. for diluted mercurial ointment (1 in 3).

Diekman, George C., reports the opinion that the dilute blue ointment made with lard or benzoinated lard is superior to that made with petrolatum.—Proc. New York Pharm. Assoc. 1911, p. 82.

An unsigned review of the Ph. Germ. V (Chem. & Drug. 1911, v. 78, p. 631) points out that assay processes have been introduced, in the case of the mercurial preparations, based on the titrimetric method. See also Pharm. J. 1911, v. 86, p. 655.

Smith, Carl E., outlines a method for the volumetric determination of mercury in ointment of mercury.—Am. J. Pharm. 1911, v. 83, p. 314; also Chem. Eng. 1911, v. 14, p. 474.

Brown, L. A., reports examining a sample of mercurial ointment which was found to be only 49.1 per cent of U. S. P. strength.—Bull. Kentucky Agric. Exper. Sta. 1911, October, pp. 25-33.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that mercurial ointment is constantly found made up with rancid lard. Sometimes the mercury has not been extinguished, and sometimes this has been accomplished in part by sulphur, because it contains mercury sulphide.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 240. See also J. Pharm. Anvers, 1911, v. 67, p. 563.

Cobb, Carolus M., calls attention to a case of syphilis treated by inunction of mercury.—Boston M. & S. J. 1911, v. 165, pp. 92-93.

UNGUENTUM HYDRARGYRI AMMONIATI.

An unsigned article (*Am. Druggist*, 1911, v. 58, p. 138) points out that the unguentum hydrargyri album of the Ph. Germ. V is prepared by mixing 1 part of ammoniated mercury with 9 parts of white petrolatum.

Wild, R. B., thinks the present 10 per cent strength is unnecessarily high; a 5 per cent ointment is better and less likely to cause trouble from absorption of mercury. The official ointment made with a paraffin base is much less efficacious than one made with lard or simple ointment.—*Brit. M. J.* 1911, v. 2, p. 162. See also *Pharm. J.* 1911, v. 87, p. 132.

Diekman, George C., reports the recommendation to leave out petrolatum from the white precipitate ointment and use just enough water to thoroughly rub out the white precipitate.—*Proc. New York Pharm. Assoc.* 1911, p. 82.

Smith, Carl E., outlines a method for the volumetric determination of mercury in ointment of ammoniated mercury.—*Am. J. Pharm.* 1911, v. 83, p. 314. Also *Chem. Eng.* 1911, v. 14, p. 474.

Nast, P. J., suggests the assay of ointment of ammoniated mercury by exhausting a known amount with petroleum benzin in a Soxhlet apparatus.—*Pacific Pharm.* 1911, v. 5, p. 202.

An unsigned review of the Ph. Germ. V (*Pharm. J.* 1911, v. 86, p. 655) points out that the mercury is now determined volumetrically, and is required to correspond to 10 per cent of ammoniated mercury.

Mendenhall, A. M., comments on a case of biniodide dermatitis resulting from the application of ammoniated mercury ointment and so-called colorless tincture of iodine.—*J. Am. M. Assoc.* 1911, v. 56, p. 1389. See also *Pract. Drug.* 1911, v. 29, Aug., p. 24.

UNGUENTUM HYDRARGYRI NITRATIS.

Jones, Ernest R., contributes a brief note on the ointment of mercuric nitrate.—*Apothecary*, Apr., 1911, v. 23, p. 26.

Cowley, R. C., reiterates his statement that nitrate of mercury ointment is incorrectly named, in that it does not contain any nitrate of mercury whatsoever.—*Chem. & Drug.* 1911, v. 78, p. 21. Also *Chem. & Drug. Australas.* 1911, v. 26, p. 58.

Boa, Peter, states that both of the ointments of mercuric nitrate will probably be omitted from the next pharmacopœia.—*Pharm. J.* 1911, v. 86, p. 407.

UNGUENTUM HYDRARGYRI OXIDI RUBRI.

Wild, R. B., thinks this ointment, at least for the treatment of pediculi, is much better made with lard or simple ointment base than with paraffin.—*Pharm. J.* 1911, v. 87, p. 132.

The Medico-Pharmaceutical Section of the Cleveland Academy of Medicine voted that both ointments of the oxides of mercury be dropped from the next Pharmacopœia, leaving the physician to prescribe the strength and base.—Bull. Pharm. 1911, v. 25, p. 169. Also Pharm. Era, 1911, v. 44, p. 113.

UNGUENTUM RESORICINI COMPOSITUM.

Dulin, William, expresses the belief that the water in hydrous wool fat is the cause of the discoloration of compound resorcin ointment.—Am. J. Pharm. 1911, v. 83, p. 77.

Thum, John K., recommends that, for the compound resorcin ointment, anhydrous wool fat be used and that the paraffin be replaced by yellow wax.—Am. Druggist, 1911, v. 58, p. 241.

A contributor to "Notes and Querries" (Drug. Circ. 1911, v. 55, p. 353) discusses the darkening of compound resorcin ointment and states that among the necessary things to do to secure an ointment that will darken but little is to use resorcin that is entirely free from related phenolic derivatives, oil of cade that is nothing more, and petrolatum that has not an acid reaction.

UNGUENTUM ZINCI STEARATIS.

Diekman, George C., reports the opinion that ointment of zinc stearate made with benzoinated lard is quite an improvement on the present formula.—Proc. New York Pharm. Assoc. 1911, p. 82.

URANIUM NITRATE.

Craig, Hugh, reports that the question was asked why the nitrate of uranium was preferred to the acetate.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 608.

Siemssen, J. A., describes the reaction of salts of uranium with ethylendiamin.—Chem. Ztg. 1911, v. 35, pp. 139, 742.

UVA URSI.

Lloyd, John Uri, states that the leaves of uva ursi or bearberry were once highly valued in Europe, but have since fallen into disuse. The domestic employment of the drug as an astringent introduced it into American medicine.—Bull. Lloyd Libr. 1911, No. 18, p. 89.

Henkel, Alice, describes and illustrates bearberry, *Arctostaphylos uva-ursi* (L.) Spreng.; also gives synonyms, other common names, the habitat and range, and data on the collection, prices, and uses.—Bull. Bur. Plant Ind. U. S. Dept. Agric. 1911, No. 219, p. 20.

Holm, Theo., describes and illustrates a fruiting branch of *Arctostaphylos uva-ursi* Spreng. He also describes and illustrates the microscopical structure of the stem, leaf, and petiole.—Merck's Rep. 1911, v. 20, pp. 95-96.

Tunmann, O., outlines a method for the detection of arbutin in uva ursi and other drugs by means of microsublimation—Ber. pharm. Gesellsch. 1911, v. 21, p. 318.

Hartwich, C., points out that the Ph. Germ. V neglects to recognize the presence of hairs on the edges and on the midrib of the leaves of uva ursi.—Apoth.-Ztg. 1911, v. 26, p. 14.

Rosenthaler, L., calls attention to and describes the crystals obtained from uva ursi by pyroanalysis.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 340–342.

Fichtenholz, A., presents a paper on the application of the biologic method to the analysis of uva ursi.—J. Pharm. et Chim. 1911, v. 4, pp. 441–446.

Rushy, H. H., states that the addition of cut stems to uva ursi seems to have nearly ceased, a result apparently of the persistent rejection of the article when so treated.—Oil, Paint and Drug Reporter, 1911, v. 80, Nov. 20, p. 28K. See also Pharm. Era, 1911, v. 44, p. 95.

Wiley, H. W., reports uva ursi inferior in quality and contaminated with a large excess of stems.—Ann. Rep. U. S. Dept. Agric. 1911–12, p. 424.

Thouvenin, Maurice, contributes an illustrated paper on the occurrence of leaves of *Buxus sempervirens* in the leaves of *Arctostaphylos uva-ursi* Spreng.—J. Pharm. et Chim. 1911, v. 3, pp. 436–440.

VACCINE.

Vanderkleed, C. E., discusses, with illustrations, some of the methods employed in making vaccine virus.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 259.

Camus, L., discusses the utilization of low temperatures in vaccine institutes and illustrates the apparatus installed.—J. Phys. et Path. gén. 1911, v. 13, pp. 394–405.

Beaxall, Frank R., presents a report on the use of oil of cloves in the preparation of glycerinated calf lymph. Eugenol has given excellent results as an antiseptic and preservative.—Rep. Local Govt. Bd. Lond. 1911–12, pp. 361–366.

The Vienna Correspondent (J. Am. M. Assoc. 1911, v. 57, p. 2151) reports the recent opening of a very large and modern institution for the production and storage of cows' lymph for vaccination purposes.

Beall, F. R., presents a report on the operations of the Government lymph establishments during the year 1911–12. Also reports observations on the action of gases under pressure on various micro-organisms and on calf lymph.—Rep. Local Govt. Bd. Lond. 1911–12, p. 181–183.

An editorial (Drug Topics, 1911, v. 26, p. 17) discusses the deterioration of commercial vaccine virus, and states that, in a great majority

of instances, the reason for its ineffectiveness is that it has been improperly stored and kept by the druggist.

An editorial (Bull. Pharm. 1911, v. 25, p. 4) comments on the numerous complaints that some of the commercial vaccines have proved ineffective, and urges the importance of keeping this product cool.

Pearson, W. A., discusses the nature of vaccines for smallpox and calls attention to some of the evident advantages of this preparation.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 237.

Staple, J. D., reports a case of so-called "insusceptibility to vaccination."—Lancet, 1911, v. 180, p. 505.

Silverstein, B. J., reports two cases of tetanus following vaccination; recovery—N. York M. J. 1911, v. 93, p. 275.

Olesen, Robert, reports on the practice of vaccination in the Philippine Islands and presents figures showing a very marked reduction in the prevalence and intensity of smallpox during the years 1908-9. Med. Rec. 1911, v. 79, pp. 390-394.

An editorial (*ibid.* p. 345) calls attention to several reports on smallpox and vaccination in Latin America, and points out that evidence of this description should be spread far and wide, so that the general public may learn from unimpeachable sources the value of vaccination.

Hoff, John Van R. (U. S. A.), insists that to vaccination and to revaccination alone are we indebted for power to control the formerly devastating and deadly infection of smallpox. Isolation and sanitation are of secondary importance.—J. Am. M. Assoc. 1911, v. 56, p. 1415.

An editorial (Brit. M. J. 1911, v. 2, p. 1122) calls attention to a very valuable report on vaccination and the vaccination law in Germany, compiled from official sources which have reached the Reichstag during the last decade.

An editorial note (Boston M. & S. J. 1911, v. 164, p. 428) on smallpox vaccination in the Philippines calls attention to recent publications by Olesen and Heiser which constitute a cogent argument against antivaccinationists, by demonstrating a most impressive modern instance of the benefits of prophylactic inoculation against smallpox, the record of which establishes one of the great services to mankind by the medical profession. See also J. Am. M. Assoc. 1911, v. 56, pp. 1041, 1124, and v. 57, p. 1701.

Schamberg and Kolmer present a preliminary report on the treatment of the vaccination site with picric acid solutions, which they have found attained highly satisfactory results.—Lancet, 1911, v. 181, pp. 1397-1399. See also editorial, p. 1570.

Rabe, R. P., states that variolinum, prophylaxis of smallpox, cures smallpox.—Hahnemann, Month. 1911, v. 46, p. 400.

Powers, L. M., states that any other form of vaccination than inoculation through abrasion or scarification with vaccine prepared from a healthy heifer is unsafe and ineffective in immunizing against smallpox.—*J. Am. Inst. Homœop.* 1911, v. 3, p. 833.

Royal, George, states that he is a believer in scarification and advises it, but if an individual wants the internal method he gives it.—*Ibid.* p. 837.

A number of references on vaccine will be found in *Index Med.*; *J. Am. M. Assoc.*; *Brit. M. J.*; and *Hyg. Rundschau*.

VALERIANA.

Lloyd, John Uri, states that, as the wild nard, valerian was described by Dioscorides and Pliny, though the name valerian was not used by the classical writers, occurring first in the Ninth and Tenth Centuries. *Bull. Lloyd. Libr.* 1911, No. 18, p. 89. See also *Eclectic Med. Glean.* 1911, v. 7, pp. 413–414.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for valerian: Water content, 7.00 to 9.10 per cent; ash content, 8.52 to 30.97 per cent; alkalinity of water soluble ash, 0.05 to 1.38 per cent; total alkalinity of ash, 1.84 to 2.15 per cent.—*Proc. Ohio Pharm. Assoc.* 1911, p. 70.

Hartwich, C., in discussing the crude drugs of the Ph. Germ. V, questions the propriety of calling a drug, consisting largely of rhizome with attached roots, a root.—*Apoth.-Ztg.* 1911, v. 26, p. 84.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 5) recommends an ash limit not exceeding 10 per cent. See also *Pharm. J.* 1911, v. 87, p. 847.

Schneider, Albert, reports on a sample of valerian which was adulterated with sand and dirt.—*Pacific Pharm.* 1911, v. 5, p. 179. See also *Merck's Rep.* 1911, v. 20, p. 3.

The Biennial Report of the Inspection of Pharmacies, 1909–10, states that powdered valerian sometimes yields an ash exceeding that tolerated by the pharmacopœia, large though it be.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, p. 231; and *J. Pharm. Anvers*, 1911, v. 67, p. 520.

Brunker, J. E., reports that of 19 samples of ammoniated tincture of valerian examined the average extractive was 4.36 gm. in 100 mls; alcohol by volume, 54.3 per cent.—*Brit. & Col. Drug.* 1911, v. 60, p. 229.

VANILLA.

Lloyd, John Uri, states that the conquering Spaniards found vanilla in use as a flavor for cacao among the Aztecs of Mexico, and naturally made this plant known to Europe.—*Bull. Lloyd Libr.* 1911, No. 18, pp. 89–90. See also *Am. Druggist*, 1911, v. 58, p. 276.

Tunmann, O., in commenting on the drug trade of Hamburg, states that the vanilla plant was introduced into the Bourbon Islands in 1839, and the first crop of 3 kilos was marketed in 1849. Cultivation has been extended to Madagascar, Mauritius, the Comores, and the Seychelles. The product of Mexico is used chiefly in that country and in the United States.—*Apoth.-Ztg.* 1911, v. 26, p. 386.

Gehe & Co. (*Handelsbericht*, 1911, pp. 79–80) report that the Bourbon vanilla crop for 1910–11 is somewhat smaller than that for the previous year. The Mexican crop, on the other hand, promises to be unusually large.

True, R. H., reports on experiments with the growing of vanilla in Florida. The plant must be cultivated under artificial shade and as yet must be pollinated by hand. So far the results have not been encouraging.—*Proc. N. W. D. A.* 1911, p. 171.

Manheimer, J., describes with illustrations the cultivation and artificial fecundation of vanilla.—*Rev. Am. Farm. y Med.* 1910–11, v. 15 (May, 1911), pp. 28–34.

Lopez y Parra, R., in an official publication (Mexico, Govt. 1911, pp. 78) discusses the culture and curing of vanilla in Mexico and in other countries, including suggestions for improving the industry.—*Exper. Sta. Rec.* 1911, v. 25, p. 645.

An unsigned article (*New Idea*, 1911, v. 33, pp. 177–178) states that of all the several varieties of vanilla found on the market the Mexican variety is of the best quality, though of late years the Bourbon beans are considered to rank very favorably with the Mexican variety.

Miller, Adolph W., reports that Bourbon vanilla beans have been in much greater demand than formerly, being, in fact, preferred in Europe.—*Proc. N. W. D. A.* 1911, p. 86.

Winship, North, reports a decree governing the gathering, preparation, and exportation of vanilla in French Oceania.—*Cons. & Tr. Rep.* Apr. 1, 1911, p. 15.

Hartwich, C., regrets that vanilla has been deleted from the Ph. Germ. This interesting and time-honored drug is gradually falling into disrepute, even as a flavoring ingredient.—*Apoth.-Ztg.* 1911, v. 26, p. 21.

Kühl, Hugo, reviews some of the recent literature on vanilla.—*Suedd. Apoth. Ztg.* 1911, v. 51, p. 772.

Feil, Joseph, discusses the various factors involved in the correct production of tincture of vanilla U. S. P.—*Proc. Ohio Pharm. Assoc.* 1911, pp. 73–74.

Irvine, Darwin W., discusses the making of flavoring extracts and presents several formulas for extract of vanilla and imitation vanilla flavor.—*Am. Druggist*, 1911, v. 59, p. 208.

Hiltner, R. S., in the referee report on flavoring extracts, outlines the methods suggested for the examination of vanilla extracts.—*Proc. Assoc. Off. Agric. Chem.* 1911, 28th Ann. Conv., p. 128 (*Bull. Bur. Chem. U. S. Dept. Agric.* 1912, No. 152).

Winton and Berry present a communication on the chemical composition of authentic extracts, together with analytical methods and limits of constants.—*Ibid.* pp. 146–158.

Caspari, Charles, jr., reports that in the examination of tincture of vanilla it is tested for artificial coloring, total solids, vanillin content, and lead number. Also tested for turmeric.—*Proc. Maryland Pharm. Assoc.* 1911, p. 103.

Table showing some of the analytical results reported for vanilla extract.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Dunlap, Renick W.	34	18	Rep. Ohio Dairy & Food Com. 1910-11, p. 48.
Street, John Phillips.	4	1	Rep. Connecticut Agric. Exper. Sta. for 1910-11, p. 581.
Do.	2	1	<i>Ibid.</i> 1911, p. 216.
Weinstein, Joseph.	5	2	Proc. New York Pharm. Assoc. 1911, p. 150.
Lythgoe, Hermann C.	6	6	Rep. Massachusetts Bd. Health, 1911, p. 432.

Notices of Judgment Nos. 730, 738, 740, 774, 806, 842, 889, 932, 939, 983, 1029, 1061, 1096, 1099, 1104, 1118, 1126, 1150, 1158, and 1166, under the food and drugs act, deal with the adulteration and misbranding of vanilla extract.

VANILLINUM.

Umney, John C., in a paper on the progress of the synthetic perfume industry, asserts that vanillin is of high commercial importance and replaces vanilla for many purposes. He states that there is little ground for the assumption that vanillin has toxic properties.—*Brit. & Col. Drug.* 1911, v. 59, p. 571.

Société Française Parfums (Fr. Pat. 421,784, Dec. 29, 1909) describes a process for making vanillin by dissolving isoeugenol in a hydrocarbon and oxidizing it by means of ozone.—*J. Soc. Chem. Ind.* 1911, v. 30, p. 446.

VERATRINA.

Murray, B. L., notes that the U. S. P. describes veratrine as "A mixture of alkaloids," but it is given a melting point of "152°." Mixtures vary, but a melting point of 152° can not vary.—*Bull. Am. Pharm. Assoc.* 1911, v. 6, p. 13. See also *Pharm. Era*, 1911, v. 44, p. 11.

Kimberly, C. H., points out that the U. S. P. recognizes *veratrum* as the rhizome of *veratrum viride* or *album*. It also recognizes an alkaloid *veratrine* which is defined as a mixture of alkaloids from *Asagracea officinalis*. This similarity of names has led to error ever since the study of these materials began.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 162.

Düsterbehn, F., in a review of the Ph. Germ. V, points out that the solubility of *veratrine* in ether is now given as 1:10.—Apoth.-Ztg. 1911, v. 26, p. 244.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 73) report that 2 samples of *veratrine* examined in detail showed marked differences.

VERATRUM.

Lloyd, John Uri, states that *veratrum viride* is usually well known to the people in sections where it is found, who call it itch-weed, Indian poke, poke-root, American hellebore, and swamp hellebore. It is reputed to have been used as an ordeal test by the American Indians, somewhat on the same order as the ordeals by the negroes of Africa at the present day.—Bull. Lloyd Libr. 1911, No. 18, pp. 90-91. See also Eclectic Med. Glean. 1911, v. 7, p. 414.

Wood, H. C., Jr., reports that as the active principle of *veratrum viride* is alkaloidal in nature a method of chemical standardization could be devised. Attention is called to the work of Eden (Arch. exper. Path. v. 29, p. 40).—J. Am. M. Assoc. 1911, v. 56, p. 606. See also Bull. Am. Pharm. Assoc. 1911, v. 6, p. 23.

Kimberley, C. H., reports a discussion on the assay of *veratrum*, and points out that a chemical method for protoveratrine, if it can be devised, would prove to be more satisfactory than a physiological test for determining the toxicity of the drug.—Bull. Am. Pharm. Assoc. 1911, v. 6, pp. 162-164.

Dohme and Englehardt think that an estimation of the total alkaloids in *veratrum* would be desirable.—Am. J. Pharm. 1911, v. 83, p. 525.

Vanderkleed, Chas. E., reports 1 assay of *veratrum* which yielded 1.900 per cent alkaloids.—Proc. Pennsylvania Pharm. Assoc. 1911, p. 132.

Schneider, Albert, reports on a sample of *veratrum* which was adulterated with some unknown root.—Pacific Pharm. 1911, v. 5, p. 180. See also Merck's Rep. 1911, v. 20, pp. 3-4.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 35) report that 1 sample of hellebore powder contained stem tissue. A second sample left 32.3 per cent of ash, rich in added chalk and iron, there being also present added stone tissue.

Cave, J. F., states that *veratrum* is a remedy that has been sadly neglected by all schools of medicine except the Eclectics. It is a remedy which will seldom disappoint the physician if he understands the physiological action and specific indications.—*Eclectic Med. Glean.* 1911, v. 7, pp. 601–603. See also *Ellingwood's Therap.* 1911, v. 5, pp. 315–316.

Niederkorn, J. S., dilates upon the value of *veratrum* in tachycardia, though this term is not sufficiently complete to portray fully the specific feature he wishes to set forth.—*Eclectic M. J.* 1911, v. 71, p. 182.

Moore, J. Murray, considers *veratrum viride* superior to *aconite* in the congestive stage of pneumonia when the heart is distinctly weak or somewhat degenerated, in which case he considers it unsafe to give *aconite*.—*Hahnemann. Month.* 1911, v. 46, p. 154.

Jones, Eli G., states that a full, hard, tense pulse means *veratrum viride*, no matter what name you may give to the condition.—*J. Therap. & Diet.* 1911, v. 5, p. 213.

VIBURNUM OPULUS.

Lloyd, John Uri, states that the bark of the high cranberry or *viburnum opulus* was used by the Indians as a diuretic and according to Rafinesque was smoked, instead of tobacco, by some of the Western Indian tribes.—*Bull. Lloyd Libr. No. 18*, pp. 91–92.

Rabe, R. P., states that *viburnum* is indicated in cases of delayed menses; feel like they would come; cramps when they do.—*Hahnemann. Month.* 1911, v. 46, p. 400.

Leming, W., states that *viburnum opulus* has made its greatest reputation as an antispasmodic where pain is the leading symptom, and quotes F. M. Beals to the effect that it will control all controllable hæmorrhages.—*J. Therap. & Diet.* 1911, v. 5, p. 255.

VIBURNUM PRUNIFOLIUM.

Lloyd, John Uri, states that the bark of black haw or *viburnum prunifolium* was employed in American domestic medication during the first part of the Nineteenth Century.—*Bull. Lloyd Libr.* 1911, No. 18, p. 92. Also *Eclectic Med. Glean.* 1911, v. 7, p. 415.

Stephens, A. F., states that *viburnum prunifolium* stands at the head of the list of remedies applicable to the treatment of diseases of the female generative organs. He points out that all stomachs will not take kindly to black haw. He has found in a few instances that the remedy caused burning in the stomach and acid eructations and was therefore omitted from the treatment.—*Nat. Eclect. M. Assoc. Quart.* 1910–11, v. 2, pp. 240–241.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 5) proposes for sherry wine limits for volatile acid (0.1 to 0.2 per cent calculated as acetic) and fixed acid (0.3 to 0.45 per cent calculated as tartaric), and an elaborate test for salicylic acid. See also Pharm. J. 1911, v. 87, p. 877.

Fortuné contributes a note on the Malaga wine of the Ph. Fr. V.—Répert. pharm. 1911, v. 23, p. 435. Also Bull. pharm. Sud-Est, 1911, v. 16, p. 348.

Utz reviews the progress made in the chemistry of wine and distilled spirits during the years 1909–10.—Pharm. Prax. 1911, v. 10, pp. 505–508. Also Oesterr. Chem.-Ztg. 1911, v. 14, pp. 177–178.

Alwood, William B., in enological studies, discusses the occurrence of sucrose in grapes.—Bull. Bur. Chem. U. S. Dept. Agric. 1911, No. 140.

He also discusses the chemical composition of American grapes grown in Ohio, New York, and Virginia.—*Ibid.* No. 145.

Ogier and Richaud discuss the employment of sulphurous acid in wine making.—Ann. falsif. 1911, v. 4, pp. 197–214.

Carles, P., contributes a note on fluorine in wines.—Ann. chim. analyt. 1911, v. 16, pp. 296–299. Also Répert. pharm. 1911, v. 23, pp. 193–195.

Windisch and Roettgen discuss the estimation of volatile acids in wines.—Ztschr. Unters. Nahr. u. Genussm. 1911, v. 22, pp. 155–170.

Verda, A., discusses the determination of volatile acids in wines.—Schweiz. Wchnschr. Chem. u. Pharm. 1911, v. 49, pp. 340–341.

Tillmans, J., reports observations on the nitric acid content of natural wines.—Ztschr. Unters. Nahr. u. Genussm. 1911, v. 22, pp. 201–207.

Malvezin, Philippe, outlines a method for the estimation of tannin in wines.—Ann. chim. analyt. 1911, v. 16, p. 221.

Richter, R., discusses the detection of sulphurous acid in white wine.—Pharm. Ztg. 1911, v. 56, pp. 148–149.

Friderich discusses Dutoit's new method for the analysis of wines.—Monit. Scientif. 1911, v. 72, pp. 705–710.

McWalter, J. C., asks why is not port or sherry wine used more generally as a galenical solvent; containing 16 to 20 per cent alcohol, it is an admirable vehicle for extracting drugs.—Brit. & Col. Drug. 1911, v. 60, p. 521.

Malaquin, Paul, presents a brief note on the question as to whether wine is to be considered a medicament.—Bull. sc. pharmacol. 1911, v. 18, Annexes, p. 277.

Schelenz, Hermann, reviews the references found in Shakespeare's works to wine and other alcoholic beverages.—Ber. pharm. Gesellsch. 1911, v. 21, pp. 373–408.

Carles, P., contributes a note on the diuretic action of white wine. He thinks that white wine passes more quickly than the red through the renal filter by reason of more rapid absorption and a selective action of its ethers.—*Répert. pharm.* 1911, v. 23, pp. 433-435.

Gaillard, A. Th., makes a contribution to the study of the bactericidal and antimicrobial action of wines and alcoholic beverages.—*Bull. Soc. roy. pharm. Brux.* 1911, v. 55, pp. 271-273.

Friedenwald, Julius, in a report of observations on the comparative toxicity of various alcoholic beverages, concludes that wine is more toxic than whisky, and the red wines are more toxic than the white wines. Beer and ale are about as toxic as whisky.—*Boston M. & S. J.* 1911, v. 165, pp. 944-946.

Additional references on the chemistry, pharmacology, and therapeutic uses of wines will be found in *Index Med.; Chem. Abstr.; Exper. Sta. Rec.; Ann. falsif.; Ztschr. Unters. Nahr. u. Genussm.; Zentralbl. Biochem u. Biophysik; and Chem. Centralbl.*

VINA MEDICATA.

Raubenheimer, Otto, states that there will be no more medicinal wines of potent drugs. These poisonous wines have always been somewhat dangerous; in fact, there is a movement on foot now to dismiss all wines from the U. S. P.—*Proc. New York Pharm. Assoc.* 1911, p. 96.

Beringer, George M., in commenting on the International Protocol requirement, questions the wisdom of an agreement that "a potent medicament should not be prepared in the form of a medicinal wine," and then the same convention immediately proceeds to adopt an international standard for wine of antimony. Is there any reason why *Vinum Ipecacuanhæ* should be eliminated from medical practice and "*Vinum Stibiatum*" retained?—*Proc. New Jersey Pharm. Assoc.* 1911, p. 78.

Alpers, William C., reports that of all the medicinal wines only wine of antimony has been retained for inclusion in the U. S. P. IX. He thinks that this preparation might well have been converted into a solution.—*D.-A. Apoth.-Ztg.* 1911-12, v. 32, p. 157.

The Chicago Branch, A. Ph. A., agrees that the only medicated wines that appear to be at all frequently prescribed are wine of colchicum and wine of antimony.—*Pharm. Era*, 1911, v. 44, p. 257.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 5) recommends that, in approximate conformity with the International Agreement, the strength of wine of antimony be reduced to 4 in 1000 w/v. See also *Pharm. J.* 1911, v. 87, p. 877.

Kebler, Lyman F., states that one of the most widely abused National Formulary preparations is beef, wine and iron. Druggists

in many sections of this country are regularly advertising this preparation at 25 cents per pint bottle and in prohibition districts particularly it is a popular beverage.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 702.

Hommell, Philemon E., thinks that the wine of iron should be dropped from the U. S. P., as it is seldom prescribed.—Pract. Drug. 1911, v. 29, July, p. 29. Also Proc. New Jersey Pharm. Assoc. 1911, p. 86.

The Committee of Reference in Pharmacy (Third Report, Suppl. p. 5) recommends that wine of iron contain not less than 0.125 nor more than 0.3 per cent of iron, calculated as Fe. The percentage of iron being thus regulated, the time for maceration (thirty days) should be omitted. See also Pharm. J. 1911, v. 87, p. 877.

Hommell, P. E., thinks that the wine and elixir of pepsin, aside from the stimulating action of the alcohol contained in them, possess but little medicinal value; the glycerite of pepsin is the best form to exhibit when pepsin is really indicated, as it sometimes is, in the case of lessened secretion.—Proc. New Jersey Pharm. Assoc. 1911, p. 83.

XANTHOXYLUM.

Lloyd, John Uri, states that prickly ash, long a domestic remedy, became a favorite in the Eclectic school of medicine by reason of its satisfactory use during the prevalence of the Asiatic cholera in Cincinnati in 1849. Its use undoubtedly originated with the primitive medication of the Indians.—Bull. Lloyd Libr. 1911, No. 18, p. 92.

Schneider, Albert, states that xanthoxylum has typical sclerenchyma cells, bast, prismatic crystals, and resin cells. It is not generally adulterated.—Merck's Rep. 1911, v. 20, p. 4.

Leming, W., gives as the specific indications for xanthoxylum: catarrhal conditions of mucous membranes, with sluggish capillary circulation, nervous depression, general atonicity; chronic dyspepsia, with moist general coated tongue, hypersecretion, and flatulency.—J. Therap. & Diet. 1911, v. 5, p. 30.

Rabe, R. P., states that xanthoxylum is indicated in cases of dysmenorrhœa, with cramps down front of thighs.—Hahnemann. Month. 1911, v. 46, p. 400.

ZEA.

Lloyd, John Uri, states that corn silk seems to have crept into the notice of the medical profession in Europe before it had any conspicuity in America. It had, however, been used in domestic practice from a very early date.—Bull. Lloyd Libr. 1911, No. 18, p. 92.

ZINCI ACETAS.

Düsterbehn, F., in a review of the Ph. Germ. V, points out that the solubility of zinc acetate in alcohol is now omitted.—Apoth.-Ztg. 1911, v. 26, p. 244.

ZINCI BROMIDUM.

Murray, B. L., states that the U. S. P. requirement that zinc bromide be "readily soluble in water" is to be taken with reservation, as elsewhere in the tests it is recognized that when this salt is dissolved in water in some proportions the solutions are cloudy from the formation of oxysalts of zinc.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 14. See also Pharm. Era, 1911, v. 44, p. 11.

Baxter and Warren report some experimental observations on the efficiency of calcium bromide, zinc bromide, and zinc chloride as drying agents.—J. Am. Chem. Soc. 1911, v. 33, pp. 340-344.

ZINCI CHLORIDUM.

Düsterbehn, F., in a review of the Ph. Germ. V, points out that zinc chloride is now described as a white crystalline powder, or as white sticks that readily melt in moist air.—Apoth.-Ztg. 1911, v. 26, p. 244. See also Chem. & Drug. 1911, v. 78, p. 125.

Linke, H., expresses the belief that the Ph. Germ. V requirements for zinc chloride have been materially increased by limiting the hydrochloric-acid addition to one drop of diluted acid.—Ber. pharm. Gesellsch. 1911, v. 21, p. 199.

Murray, B. L., declares that the statement that zinc chloride is readily soluble is to be taken with reservation.—Pharm. Era, 1911, v. 44, p. 11.

"O. T." calls attention to the confusion as to the identity of the precipitate which forms when zinc chloride is dissolved in water.—Chem. & Drug. 1911, v. 78, p. 556.

White, Edmund, enumerates some of the tests for zinc chloride, and points out that in the form of nearly white or greyish-white lumps or powder it has many technical applications, and usually contains traces of other metals and considerable quantities of iron as well as sulphate.—Pharm. J. 1911, v. 86, p. 556.

Baxter and Warren report some experimental observations on the efficiency of calcium bromide, zinc bromide, and zinc chloride as drying agents.—J. Am. Chem. Soc. 1911, v. 33, pp. 340-344.

Smith, Kline & French Co. (Analytical Report, 1911, p. 44) reports that 1 sample of zinc chloride was examined and found to be abnormal in oxychloride and sulphate.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 74) report that 2 samples of zinc chloride contained 84.0 per cent of anhydrous salt.

The Biennial Report of the Inspection of Pharmacies, 1909-10, calls attention to the neglect to protect zinc chloride which liquefies rapidly from moisture. It is sometimes basic and incompletely soluble in water.—Bull. Soc. roy. pharm. Brux. 1911, v. 55, p. 236. Also J. Pharm. Anvers, 1911, v. 67, p. 524.

ZINCI IODIDUM.

Murray, B. L., notes that the U. S. P. requires zinc iodide to be "readily soluble in water." Elsewhere in the tests, however, the fact is recognized that when the salt is dissolved in water in some proportions the solutions are cloudy from the formation of oxysalts of zinc.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 14.

ZINCI OXIDUM.

Düsterbehn, F., in a review of the Ph. Germ. V, calls attention to some of the changes made in the tests for zinc oxide.—Apoth.-Ztg. 1911, v. 26, p. 244.

Evans Sons Lescher & Webb (Analytical Notes, 1911, 1912, p. 74) report that 17 samples of zinc oxide contained from 0.02 to 0.1 per cent of lead. Three other samples contained 0.2 to 0.4 per cent, 1 of which also contained 0.4 per cent of zinc sulphide.

The Biennial Report of the Inspection of Pharmacies, 1909-10, states that zinc oxide is sometimes mixed with talc and kaolin.—Bull. Soc. roy. pharm. Brux. 1911, v. 5, p. 235. Also J. Pharm. Anvers, 1911, v. 67, p. 524.

Brown, L. A., reports examining a sample of zinc oxide which was found to contain 91.45 per cent of silica. Bull. Kentucky Agric. Exper. Sta. 1911, Oct., pp. 25-33.

Lythgoe, Hermann C., reports that a sample of zinc ointment examined was found to contain 17.11 per cent of zinc oxide.—Rep. Massachusetts Bd. Health, 1911, p. 443.

McKellar, Arthur, commenting on the blackening of gold rings by zinc ointment, reports an incident in which bed linen was stained by zinc ointment, found later to contain lead.—Pharm. J. 1911, v. 87, p. 772.

ZINCI PHENOLSULPHONAS.

Smith, Kline & French Co. (Analytical Report, 1911, p. 44) reports that 2 samples of zinc phenolsulphonate were examined and found to be of satisfactory quality.

French, J. M., recommends zinc sulphocarbolate as an intestinal antiseptic and antizymotic.—J. Therap. & Diet. 1911, v. 5, p. 143.

ZINCI SULPHAS.

Düsterbehn, F., in a review of the Ph. Germ. V, points out that zinc sulphate is now described as being readily soluble in water and nearly insoluble in alcohol.—Apoth.-Ztg. 1911, v. 26, p. 244.

See also Chem. & Drug. 1911, v. 78, p. 125.

White, Edmund, enumerates some of the tests for zinc sulphate and states that the commercial article is often of very fair purity if white and well crystallized. The chief impurities to be expected are arsenic and iron.—Pharm. J. 1911, v. 86, p. 556.

Collit, Bernard, notes that zinc sulphate may contain manganese, and suggests that this be included among the substances from which zinc sulphate should be free. He states that an examination of samples shows that zinc sulphate may easily be obtained free from manganese and practically free from iron.—*Ibid.* p. 5.

McCowan, W. (Eng. Pat. 561, Jan. 9, 1911), describes a process for the manufacture of zinc sulphate.—J. Soc. Chem. Ind. 1911, v. 30, p. 1115.

Smith, Kline & French Co. (Analytical Report, 1911, p. 44) reports that 7 samples of zinc sulphate were received and examined. Two contained an abnormal amount of chloride. See also Pearson, W. A., Proc. Pennsylvania Pharm. Assoc. 1911, p. 131; and Bull. Am. Pharm. Assoc. 1911, v. 6, p. 349.

Lippich, Fritz, reports observations on the precipitation of albumin with zinc sulphate.—Ztschr. physiol. Chem. 1911, v. 74, pp. 360–391.

An editorial (Lancet, 1911, v. 181, p. 31) discusses zinc ionization in lupus vulgaris, with special reference to the favorable results reported by Stopford-Taylor and MacKenna.

ZINCI VALERAS.

The Committee of Reference in Pharmacy (Third Report, Suppl., p. 5) recommends that the formula for zinc valerianate be altered to $\text{Zn}(\text{C}_6\text{H}_7\text{O}_2)_2 \cdot 2\text{H}_2\text{O}$, and the salt should be required to yield on incineration from 26 to 27 per cent of zinc oxide. See also Pharm. J. 1911, v. 87, p. 877.

Murray, B. L., states that the U. S. P. requires zinc valerate to dissolve in "about 50 parts of water." In practice about 120 parts are required.—Bull. Am. Pharm. Assoc. 1911, v. 6, p. 14.

Smith, Kline & French Co. (Analytical Report, 1911, p. 44) reports that 5 samples of zinc valerate were examined. One was rejected as containing an abnormal amount of chlorides.

ZINGIBER.

Lloyd, John Uri, states that ginger was known to the ancients, being extensively used by the Greeks and Romans, who considered it an Arabian product because it came to them among spices from India by way of the Red Sea.—Bull. Lloyd Libr. 1911, No. 18, p. 93.

Harris, William, states that *Zingiber officinale* Rosc. is a native of tropical Asia and was introduced into Jamaica during the Spanish occupation of the island.—Bull. Dept. Agric. Jamaica, 1911, v. 1, No. 4, p. 247.

Macfarlane, J. J., states that the world's production of ginger in 1909 amounted to 22,614,000 pounds, and gives the leading exporting countries with the statistics of exports from Jamaica from 1894 to 1909.—*Chem. & Drug*. 1911, v. 78, p. 489.

Schneider, Albert, states that zingiber contains simple, large oval to irregularly elliptical starch grains with indistinct hili and lamellation, polarizing phenomena pronounced but delicate. It is adulterated with cereal, exhausted ginger, mustard, capsicum, etc.—*Merck's Rep.* 1911, v. 20, p. 4.

Thurston and Thurston, in discussing the requirements for powdered vegetable drugs, report for zingiber: water content, 10.94 per cent; ash content, 5.62 per cent; alkalinity of water soluble ash, 1.79 per cent; total alkalinity of ash, 4.47 per cent.—*Proc. Ohio Pharm. Assoc.* 1911, p. 70.

Beythien, Hempel, and others present a table showing the ash content and the extract content of a number of samples of ginger. The ash content was found to vary from 4.68 to 10.59 per cent. The ether extract content varied from 0.80 to 4.20 per cent, and the alcohol extract content from 1.33 to 4.00 per cent.—*Ztschr. Unters. Nahr. u. Genussm.* 1911, v. 21, p. 668.

Southall Bros. & Barclay (*Rep.* 1911, Birmingham, 1912, p. 12) report that the following figures for ash were obtained for powders of various qualities of ginger of their own grinding: Jamaica 3.64 and 3.88 per cent, African 4.88 per cent, Cochin 5.60 per cent.

Stock, W. F. K., testified in a case under the Sale of Food and Drugs Act that a sample of ginger contained 16.4 per cent of mineral ash.—*Pharm. J.* 1911, v. 86, p. 274.

A news note (*Brit. Food J.* 1911, v. 13, p. 213) reports a sample of ground ginger which was found to contain 12 per cent of chalk.

Schneider, Albert, reports on 18 samples of ginger, 4 of which were adulterated with cereal and exhausted ginger.—*Pacific Pharm.* 1911, v. 5, p. 177.

Vanderkleed, Chas. E., reports 11 assays of African ginger; lowest 7.128 per cent; highest 9.484 per cent oleoresin; all above standard. He also reports 8 assays of Jamaica ginger: lowest 3.400 per cent, highest 6.600 per cent; 7 above and 1 below standard.—*Proc. Pennsylvania Pharm. Assoc.* 1911, p. 132.

Schimmel & Co. (*Semi-Annual Report*, April, 1911, p. 75) report that the tendency of all varieties of ginger suitable for distillation has been an upward one for the past few months. It is notorious that of late African ginger has only been brought to market in quite small quantities.

Evans Sons Lescher & Webb (*Analytical Notes*, 1911, 1912, p. 34) report that one sample of genuine oil of ginger from the African plant gave a specific gravity of 0.881, an optical rotation of -45.18° , and a refractive index of 1.4932.

Southall Bros. & Barclay (Rep. 1911, Birmingham, 1912, p. 27) report that a sample of oil of ginger furnished normal results: specific gravity, 0.8845; rotation, -33.2° ; refractive index, 1.4930.

Hiltner, R. S., in the referee report on flavoring extracts, outlines the methods for the examination of ginger extracts.—Proc. Assoc. Off. Agric. Chem. 1911, 28th Ann. Conv. p. 137 (Bull. Bur. Chem. U. S. Dept. Agric. 1912, No. 152).

Kebler and Kimberly outline a proposed standard for tincture of ginger.—*Ibid.* pp. 244-248.

Lythgoe and Nurenberg report some observations on the composition of tincture of ginger and present a chart showing the relation between alcohol and solids in tincture of ginger.—J. Ind. & Eng. Chem. 1911, v. 3, pp. 910-912.

Street, John Phillips, reports a series of experiments in the production of standard samples of tincture of ginger, and states that the individual samples showed considerable variation in their specific gravity and extract content. He notes that the most characteristic feature of the resulting tinctures was the high alcohol solubility of the solids and the small proportion of the material soluble in 95 per cent alcohol that is likewise soluble in cold water.—Rep. Connecticut Agric. Exper. Sta. for 1910-11, pp. 498-504.

Havenhill, L. D., reports that an examination of 42 samples of tincture of ginger showed a range in alcoholic strength of from 45.75 per cent to 94.6 per cent. About 82 per cent of the preparations were found to contain 88 per cent or more of alcohol.—Proc. Kansas Pharm. Assoc. 1911, p. 110.

Street, John Phillips, reports on 34 samples of ginger extract, 20 of which were adulterated or below standard.—Rep. Connecticut Agric. Exper. Sta. for 1910, 1911, p. 581.

Howard, Charles D., reports that of 3 samples of extract of ginger examined all fell below the requirements for a preparation made strictly in accordance with the U. S. P.—New Hampshire San. Bull. 1911, v. 3, No. 14, p. 282.

Rose, R. E., reports that of 8 samples of essence of ginger 4 were found to be illegal.—Bull. Florida Agric. Dept. 1911, v. 21, pp. 116-117.

Brunker, J. E., reports that of 50 samples of tincture of ginger examined the average extractive was 0.51 gm. in 100 mls; alcohol by volume, 88.1 per cent.—Brit. & Col. Drug. 1911, v. 60, p. 229.

Notices of Judgment Nos. 920, 936, and 1057, under the food and drugs act, deal with the adulteration and misbranding of Jamaica ginger.

LIST OF HYGIENIC LABORATORY BULLETINS OF THE U. S. PUBLIC
HEALTH SERVICE.

The Hygienic Laboratory was established in New York, at the Marine Hospital on Staten Island, August, 1887. It was transferred to Washington, with quarters in the Butler Building, June 11, 1891, and a new laboratory building, located in Washington, was authorized by act of Congress March 3, 1901.

The following *bulletins* [Bulls. Nos. 1-7, 1900 to 1902, Hyg. Lab., U. S. Mar.-Hosp. Serv., Wash.] have been issued:

* No. 1.—Preliminary note on the viability of the *Bacillus pestis*. By M. J. Rosenau.

No. 2.—Formalin disinfection of baggage without apparatus. By M. J. Rosenau.

* No. 3.—Sulphur dioxid as a germicidal agent. By H. D. Geddings.

* No. 4.—Viability of the *Bacillus pestis*. By M. J. Rosenau.

No. 5.—An investigation of a pathogenic microbe (*B. typhi murium* Danyz) applied to the destruction of rats. By M. J. Rosenau.

* No. 6.—Disinfection against mosquitoes with formaldehyde and sulphur dioxid. By M. J. Rosenau.

† No. 7.—Laboratory technique: Ring test for indol, by S. B. Grubbs and Edward Francis; Collodium sacs, by S. B. Grubbs and Edward Francis; Microphotography with simple apparatus, by H. B. Parker.

By act of Congress approved July 1, 1902, the name of the "United States Marine-Hospital Service" was changed to the "Public Health and Marine-Hospital Service of the United States" and three new divisions were added to the Hygienic Laboratory.

Since the change of name of the service the bulletins of the Hygienic Laboratory have been continued in the same numerical order, as follows:

* No. 8.—Laboratory course in pathology and bacteriology. By M. J. Rosenau. (Revised edition, March, 1904.)

† No. 9.—Presence of tetanus in commercial gelatin. By John F. Anderson.

* No. 10.—Report upon the prevalence and geographic distribution of hookworm disease (uncinariasis or anchylostomiasis) in the United States. By Ch. Wardell Stiles.

* No. 11.—An experimental investigation of *Trypanosoma lewisi*. By Edward Francis.

* No. 12.—The bacteriological impurities of vaccine virus; an experimental study. By M. J. Rosenau.

* No. 13.—A statistical study of the intestinal parasites of 500 white male patients at the United States Government Hospital for the Insane; by Philip E. Garrison, Brayton H. Ransom, and Earle C. Stevenson. A parasitic roundworm (*Agamomermis culicis* n. g., n. sp.) in American mosquitoes (*Culex sollicitans*); by Ch. Wardell Stiles. The type species of the cestode genus *Hymenolepis*; by Ch. Wardell Stiles.

* 14. Spotted fever (tick fever) of the Rocky Mountains; a new disease. By John F. Anderson.

* No. 15.—Inefficiency of ferrous sulphate as an antiseptic and germicide. By Allan J. McLaughlin.

* No. 16.—The antiseptic and germicidal properties of glycerin. By M. J. Rosenau.

* No. 17.—Illustrated key to the trematode parasites of man. By Ch. Wardell Stiles.

* No. 18.—An account of the tapeworms of the genus *Hymenolepis* parasitic in man, including reports of several new cases of the dwarf tapeworm (*H. nana*) in the United States. By Brayton H. Ransom.

* No. 19.—A method for inoculating animals with precise amounts. By M. J. Rosenau.

* No. 20.—A zoological investigation into the cause, transmission, and source of Rocky Mountain "spotted fever." By Ch. Wardell Stiles.

* No. 21.—The immunity unit for standardizing diphtheria antitoxin (based on Ehrlich's normal serum). Official standard prepared under the act approved July 1, 1902. By M. J. Rosenau.

* No. 22.—Chloride of zinc as a deodorant, antiseptic, and germicide. By T. B. McClintic.

* No. 23.—Changes in the Pharmacopœia of the United States of America. Eighth Decennial Revision. By Reid Hunt and Murray Galt Motter.

No. 24.—The International Code of Zoological Nomenclature as applied to medicine. By Ch. Wardell Stiles.

* No. 25.—Illustrated key to the cestode parasites of man. By Ch. Wardell Stiles.

* No. 26.—On the stability of the oxidases and their conduct toward various reagents. The conduct of phenolphthalein in the animal organism. A test for saccharin, and a simple method of distinguishing between cumarin and vanillin. The toxicity of ozone and other oxidizing agents to lipase. The influence of chemical constitution on the lipolytic hydrolysis of ethereal salts. By J. H. Kastle.

* No. 27.—The limitations of formaldehyde gas as a disinfectant with special reference to car sanitation. By Thomas B. McClintic.

* No. 28.—A statistical study of the prevalence of intestinal worms in man. By Ch. Wardell Stiles and Philip E. Garrison.

* No. 29.—A study of the cause of sudden death following the injection of horse serum. By M. J. Rosenau and John F. Anderson.

† No. 30.—I. Maternal transmission of immunity to diphtheria toxine. II. Maternal transmission of immunity to diphtheria toxine and hypersusceptibility to horse serum in the same animal. By John F. Anderson.

† No. 31.—Variations in the peroxidase activity of the blood in health and disease. By Joseph H. Kastle and Harold L. Amoss.

† No. 32.—A stomach lesion in guinea pigs caused by diphtheria toxine and its bearing upon experimental gastric ulcer. By M. J. Rosenau and John F. Anderson.

* No. 33.—Studies in experimental alcoholism. By Reid Hunt.

† No. 34.—I. *Agamofilaria georgiana* n. sp., an apparently new roundworm parasite from the ankle of a negress. II. The zoological characters of the roundworm genus *Filaria* Mueller, 1787. III. Three new American cases of infection of man with horse-hair worms (species *Paragordius varius*), with summary of all cases reported to date. By Ch. Wardell Stiles.

† No. 35.—Report on the origin and prevalence of typhoid fever in the District of Columbia. By M. J. Rosenau, L. L. Lumsden, and Joseph H. Kastle. (Including articles contributed by Ch. Wardell Stiles, Joseph Goldberger, and A. M. Stimson.)

† No. 36.—Further studies upon hypersusceptibility and immunity. By M. J. Rosenau and John F. Anderson.

† No. 37.—Index-catalogue of medical and veterinary zoology. Subjects: Trematoda and trematode diseases. By Ch. Wardell Stiles and Albert Hassall.

No. 38.—The influence of antoxin upon post-diphtheritic paralysis. By M. J. Rosenau and John F. Anderson.

† No. 39.—The antiseptic and germicidal properties of solutions of formaldehyde and their action upon toxines. By John F. Anderson.

† No. 40.—1. The occurrence of a proliferating cestode larva (*Sparganum proliferum*) in man in Florida, by Ch. Wardell Stiles. 2. A reexamination of the type specimen of *Filaria testiformis* Leidy, 1880=*Agamomermis testiformis*, by Ch. Wardell Stiles.

3. Observations on two new parasitic trematode worms *Homalogaster philippinensis* n. sp., *Agamodistomum nanus* n. sp., by Ch. Wardell Stiles and Joseph Goldberger.
4. A reexamination of the original specimen of *Tenia saginata abietina* (Weinland, 1858), by Ch. Wardell Stiles and Joseph Goldberger.

† No. 41.—Milk and its relation to the public health. By various authors.

† No. 42.—The thermal death points of pathogenic micro-organisms in milk. By M. J. Rosenau.

† No. 43.—The standardization of tetanus antitoxin (an American unit established under authority of the act of July 1, 1902). By M. J. Rosenau and John F. Anderson.

No. 44. Report No. 2 on the origin and prevalence of typhoid fever in the District of Columbia, 1907. By M. J. Rosenau, L. L. Lumsden, and Joseph H. Kastle.

† No. 45.—Further studies upon anaphylaxis. By M. J. Rosenau and John F. Anderson.

No. 46.—*Hepatozoon perniciosum* (n. g., n. sp.); a hæmogregarine pathogenic for white rats; with a description of the sexual cycle in the intermediate host, a mite (*Lelaps echidninus*). By W. W. Miller.

* No. 47.—Studies on Thyroid: I. The relation of iodine to the physiological activity of thyroid preparations. By Reid Hunt and Atherton Seidell.

No. 48.—The physiological standardization of digitalis. By Charles Wallis Edmunds and Worth Hale.

No. 49. Digest of comments on the United States Pharmacopœia. Eighth decennial revision for the period ending December 31, 1905. By Murray Galt Motter and Martin I. Wilbert.

No. 50.—Further studies upon the phenomenon of anaphylaxis. By M. J. Rosenau and John F. Anderson.

No. 51.—Chemical tests for blood. By Joseph H. Kastle.

No. 52.—Report No. 3 on the origin and prevalence of typhoid fever in the District of Columbia (1908). By M. J. Rosenau, Leslie L. Lumsden, and Joseph H. Kastle.

No. 53.—The influence of certain drugs upon the toxicity of acetanilide and antipyrine. By Worth Hale.

No. 54. The fixing power of alkaloids on volatile acids and its application to the estimation of alkaloids with the aid of phenolphthalein or by the Volhard method. By Elias Elvove.

No. 55. Quantitative pharmacological studies: Adrenalin and adrenalin-like bodies. By W. H. Schultz.

No. 56.—Milk and its relation to the public health. (Revised edition of Bulletin No. 41.) By various authors.

* No. 57.—I. The presence of tubercle bacilli in the circulating blood in clinical and experimental tuberculosis. By John F. Anderson. II. The viability of the tubercle bacillus. By M. J. Rosenau.

No. 58.—Digest of comments on the Pharmacopœia of the United States of America (eighth decennial revision) and the National Formulary for the period ending December 31, 1906. By Murray Galt Motter and Martin I. Wilbert.

No. 59. The oxidases and other oxygen catalysts concerned in biological oxidation. By Joseph Hoeing Kastle.

No. 60.—A study of the anatomy of *Watsonius* (n. g.) *watsoni* of man, and of 19 allied species of mammalian trematode worms of the superfamily Paramphistomoidea. By Ch. Wardell Stiles and Joseph Goldberger.

No. 61.—Quantitative pharmacological studies: Relative physiological activity of some commercial solutions of epinephrin. By W. H. Schultz.

No. 62.—The taxonomic value of the microscopic structure of the stigmal plates in the tick genus *Dermacentor*. By Ch. Wardell Stiles.

† No. 63.—Digest of comments on the Pharmacopœia of the United States of America (eighth decennial revision) and the National Formulary (third edition) for the calendar year ending December 31, 1907. By Murray Galt Motter and Martin I. Wilbert.

No. 64.—Studies upon anaphylaxis with special reference to the antibodies concerned. By John F. Anderson and W. H. Frost.

* No. 65.—Facts and problems of rabies. By A. M. Stimson.

No. 66.—I. The influence of age and temperature on the potency of diphtheria antitoxin. By John F. Anderson. II. An organism (*Pseudomonas protea*) isolated from water, agglutinated by the serum of typhoid-fever patients. By W. H. Frost. III. Some considerations on colorimetry, and a new colorimeter. By Norman Roberts. IV. A gas generator, in four forms, for laboratory and technical use. By Norman Roberts.

† No. 67.—The solubilities of the pharmacopœial organic acids and their salts. By Atherton Seidell.

No. 68.—The bleaching of flour and the effect of nitrites on certain medicinal substances. By Worth Hale.

No. 69.—The effect of a restricted diet and of various diets upon the resistance of animals to certain poisons. By Reid Hunt.

No. 70.—A study of melting-point determinations with special reference to the melting-point requirements of the United States Pharmacopœia. By George A. Menge.

No. 71.—I. Some known and three new endoparasitic trematodes from American fresh-water fish. By Joseph Goldberger. II. On some new parasitic trematode worms of the genus *Telorchis*. By Joseph Goldberger. III. A new species of *Atheresia* from a monkey. By Joseph Goldberger and Charles G. Crane.

† No. 72.—I. Report on an outbreak of typhoid fever at Omaha, Nebr. (1909-1910). By L. L. Lumaden. II. The water supply of Williamson, W. Va., and its relation to an epidemic of typhoid fever. By W. H. Frost.

No. 73.—The effects of a number of derivatives of choline and analogous compounds on the blood pressure. By Reid Hunt and R. de M. Taveau.

* No. 74.—Digitalis standardization and the variability of crude and of medicinal preparations. By Worth Hale.

No. 75.—Digest of comments on the Pharmacopœia of the United States of America (eighth decennial revision) and the National Formulary (third edition) for the calendar year ending December 31, 1906. By Murray Galt Motter and Martin I. Wilbert.

* No. 76.—The Physiological Standardization of Ergot. By Charles Wallis Edmunds and Worth Hale.

No. 77.—Sewage Pollution of Interstate Waters and International Waters with special reference to the spread of typhoid fever. I. Lake Erie and the Niagara River. By Alan J. McLaughlin.

No. 78.—Report No. 4 on the origin and prevalence of typhoid fever in the District of Columbia (1909). By L. L. Lumaden and John F. Anderson.

* No. 79.—Digest of Comments on the Pharmacopœia of the United States of America (eighth decennial revision) and the National Formulary (third edition) for the calendar year ending December 31, 1909. By Murray Galt Motter and Martin I. Wilbert.

* No. 80.—Physiological Studies in Anaphylaxis. Reaction of smooth muscle from various organs of different animals to proteins. (Including reaction of muscle from nonsensitized, sensitized, tolerant, and immunized guinea pigs). By W. H. Schultz.

No. 81.—Tissue Proliferation in Plasma Medium. By John Sundwall.

No. 82.—I. Method of standardizing disinfectants with and without organic matter. By John F. Anderson and Thomas B. McClintic. II. The determination of the phenol coefficient of some commercial disinfectants. By Thomas B. McClintic.

No. 83.—Sewage pollution of interstate and international waters with special reference to the spread of typhoid fever. II. Lake Superior and St. Marys River. III. Lake Michigan and the Straits of Mackinac. IV. Lake Huron, St. Clair River, Lake St. Clair, and the Detroit River. V. Lake Ontario and St. Lawrence River. By Allan J. McLaughlin.

* No. 84.—Digest of comments on the Pharmacopœia of the United States of America (eighth decennial revision) and on the National Formulary (third edition) for the calendar year ending December 31, 1910. By Murray Galt Motter and Martin I. Wilbert.

No. 85.—Index catalogue of medical and veterinary zoology. Subjects: Cestoda and cestodaria. By Ch. Wardell Stiles and Albert Hassall.

By act of Congress approved August 14, 1912, the name of the "Public Health and Marine Hospital Service of the United States" was changed to the "Public Health Service." Since this change of name the bulletins of the Hygienic Laboratory have been continued in numerical order:

No. 86.—Studies on typhus. By John F. Anderson and Joseph Goldberger.

No. 87.—Digest of comments on the Pharmacopœia of the United States of America (eighth decennial revision) and on the National Formulary (third edition) for the calendar year ending December 31, 1911. By Murray Galt Motter and Martin I. Wilbert.

In citing these bulletins, bibliographers and authors are requested to adopt the following abbreviations: Bull. No. —, Hyg. Lab., Wash., pp. —.

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